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First Named Inventor	Dumont M. Jones
Art Unit	2167
Examiner Name	Kimberly M. Lovel
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ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
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Signature	Jane Keeney		
Typed or printed name	Jane Keeney	Date	October 02, 2007

Appeal Brief

By: Dumont M. Jones, et al.

U.S. Serial No. 10/706,352

Filed November 12, 2003

"DOCUMENT SEARCH METHOD WITH INTERACTIVELY EMPLOYED DISTANCE GRAPHICS DISPLAY"

Examiner Kimberly M. Lovel

Group Art Unit 2167

Table of Contents

Real Party in Interest

The appealed application is assigned to Proximate Technologies, LLC, a limited liability company of the State of Ohio, having an office at 55 North Cassingham Road, Columbus, Ohio, 43209

Related Appeals and Interferences

There are no related appeals or interferences known to the Appellants, their legal representatives, or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

The appealed application was filed November 12, 2003 with claims 1-24. Claims 1-24 are the subject of this appeal. Dependent claims 6, 23 and 24 have been deemed allowable but objected to.

The appealed application relies upon United States provisional application No. 60/425,854, filed November 12, 2002.

In a first Office Action mailed May 18, 2006, objections were made to the drawings and typographical components of the claims. Claims 1-21 were rejected under 35 USC 103 (a) as being unpatentable over US PGPub 2003/0135513 to Quinn, et al. (hereinafter Quinn, et al) in view of US PGPub 2005/0086238 to Nevin, III, (hereinafter Nevin), Claims 22-24 were rejected under 35 USC 103 (a) as being unpatentable over US PGPub 2004/0078366 to Crooks, et al., (hereinafter Crooks, et al.) in view of Nevin.

Applicants filed an amendment and response which was mailed August 15, 2006 providing corrections as required to the drawings and specification of the application, along with arguments looking to the patentability of the claims. Included with the response was a declaration under 37 CFR 1.132 (the August 2006 declaration) showing that the teachings of Quinn, et al. were not supported by its underlying provisional application as well as arguing the substantive merits of Quinn, et al., as well as Nevin and Crooks, et al. Additionally submitted was a declaration under 37 CFR 1.131 declaring behind Quinn, et al., based upon its actual as opposed to provisional filing date. Annexed to this declaration was a copy of a power point presentation made to Lexis/Nexis as well as an independent third party copy of a backup or archiving tabulation of the software of the invention prior to the critical date.

In a second non-final Office Action mailed November 15, 2006, the rejection of claims 1-21 as being unpatentable over Quinn, et al., in view of Nevin and claims 22-24 as being unpatentable over Crooks, et al., in view of Nevin was withdrawn as necessitated by Appellant's argument. The Appellant's arguments with respect to the declaration under 37 CFR 1.132 were indicated as having been considered but as being moot in view of new grounds of rejection. The declaration filed under 37 CFR 1.131 was considered but indicated to be ineffective. Objections to the drawings and claims were withdrawn. In this second Office Action, claims 1-21 were rejected under 35 USC 103 (a) as being unpatentable over U.S. Patent No. 7,085,755 to Bluhm, et al, hereinafter (Bluhm) in view of Nevin. Claims 22-24 were rejected under 35 USC 103 (a) as being unpatentable over Crooks, et al., in view of Nevin. In a response mailed February 15, 2007, Applicants provided argument seeking to overcome the rejection and included a second declaration under 37 CFR 1.132 (the February 2007 declaration) distinguishing Bluhm, Nevin and Crooks, et al.

A third non-final Office Action was mailed May 17, 2007 in which claims 1-12 were rejected under 35 USC 103 (a) as being unpatentable over U.S. Patent No. 6,778,995 to Gallivan (hereinafter Gallivan) in view of Bluhm, in view of Nevin. Claims 13-21 were rejected under 35 USC 103 (a) as being unpatentable over Bluhm, in view of Nevin. Claims 22-24 were rejected under 35 USC 103 (a0 as being unpatentable over Crooks, et al., in view of Nevin. Claims 6, 23 and 24 were objected to as being dependent upon a rejected base claim, but it was indicated they would be allowable if rewritten in independent form.

The Appellants filed a notice of appeal on August 07, 2007.

Claims 1-24 are being appealed.

Status of Amendments

No amendments have been filed subsequent to the Office Action mailed May 17, 2007.

Summary of Claimed Subject Matter

The present invention is directed to a method for evaluating or searching the text content of a document database utilizing a potential (field) or distance function approach in combination with a graphics display of one or more multi-node nets. The nets are comprised of nodes, interactions associating two or more nodes and distance related document symbols. This geometric display achieves a human vision-based user interaction permitting the generation of refined net nodes essentially without recourse to requiring the user to read an excessive amount of textual material.

Concerning claim 1, a computer interface is provided with a display such that user interaction can take place with respect to the display. Such displays are shown in Figs. 2-8, 16C and 17. A document database is gathered into the system as illustrated in Fig. 9A at blocks 204 and 208 and described at page 18, lines 15-16. The flowcharts in the application utilize sub-designations such that where user interaction is involved, wherein the user is interacting with the computer display then that block of the flowchart is associated with a small circle carrying the letters "UI" as described at page 17, line 32. Where the flowchart block is concerned with the internal functioning of the computer system as opposed to user interaction, then the pertinent flowchart block is associated with a square symbol carrying the letters "SP" representing a system process, performed entirely by the system itself without user interaction except to initiate the process as described at page 18, lines 1-2. Where pertinent block in a flowchart is associated with a hexagonally shaped symbol carrying the letters "BP", then the method function is one associated with the underlying business or endeavor and is a process performed by the user entirely outside the boundaries of the system at hand as described at page 18, lines 3-6.

Step (c) of claim 1 calls for normalizing the gathered documents as described at page 18, lines 19 and 20 and at block 212 in Fig. 9A and is further described at the flowchart of Fig. 11 which, in turn, is described at page 22, lines 6-34 and page 23, lines 1-29. Where numbered normalization is called for, then the procedure follows the flowchart of Fig. 12 which is described at page 23, lines 30-34, page 24 and page 25, lines 1-14. Claim 1, paragraph (d) calls for fingerprinting the gathered documents as described at page 18, lines 21-24 and shown in Fig. 9A at block 214.

Step (e) calls for determining text criteria with respect to the document population which is described in connection with block 218 of Fig. 9A and further at page 18, lines 25-31.

Step (f) of claim 1 calls for forming a net comprising at least two nodes associated by at least one interaction displayable as two or more spaced apart nodes connected by an interaction. This is described in connection with block 222 of Fig. 9A and at page 18, lines 31-33, Fig. 10 and page 19, lines 1-25. Sample nets are shown in Figs. 2-4 and described at page 13

and page 14, lines 1-30. Looking to Fig. 2 a two node net comprises a positive text node described at 14 in Fig. 1 in combination with a null node 20. Node 20 has not attractor information. Nodes 18 and 20 are seen to be associated by an interaction which is displayed as a line 22 extending between them. The relative spacing of the nodes is of no importance. However, note
that square documents symbols 24-28 are present such that the user will have a visual representation of the number of documents which are relevant and the extent of their relevancy without having to read the text itself. This visualized association of document symbols, interaction and nodes is essential to the invention.

Step (g) calls for loading the text criteria into at least one of the nodes. This is shown at block 274 in Fig. 9A and described at page 19, lines 27-31 and illustrated in Fig. 1 as described at page 12, lines 30-33.

Step (h) recites that for each document of said data base, calculating its geometric relative distance from a said node to derive one or more node attractors. This is described in connection with block 286 at Fig. 9A and at page 20, lines 1-4.

Step (i) calls for displaying said net at said display in combination with one or more document symbols each representing a said document located in correspondence with the calculated relative distance. Such display is discussed in connection with block 290 of Fig. 9A as discussed at page 20, lines 4-6. See additionally Figs. 2-4, for example, in Fig. 3 a positive node is shown at 32 spaced from a negative node 34 and interconnected by interaction 36. Document symbols 38-42 are visually identifiable with respect to their relevance to the nodes.

Step (j) calls for visually examining the display of the net and the document symbols again represented at Fig. 9A at block 290 and described at page 20, lines 6-12.

Step (k) of claim 1 calls for determining from the document symbol locations at the display, those documents if any which are more likely to correspond with the text criteria. In Fig. 2, document symbol 24 is close to the interaction 22 and positive node 18 while document symbol 28 is more remote. In similar fashion, document symbol 38 is close to positive node 32 in Fig. 3 while document symbol 42 is remote and close to negative node 34.

Claim 2 recites that step (f) provides for the display of the net as having nodes defined as circles and the interaction defined as a line extending between the circles. This is illustrated, for example, in Fig. 3 showing a positive node as a circle 32 and a negative node shown in a circle 34 with an interaction line 36 extending between them.

Claim 3 recites the step (g) loads said text criteria into a positive designated one of said nodes. Fig 3 node 32 is a positive node as described at page 13, lines 31 and 32.

Claim 4 recites that step (f) forms said net as comprising a said positive designated node and a null designated node connected by an interaction. Such an arrangement is represented in

Fig. 2 with a positive node 18 spaced from a null node 20 connected by an interaction 22. This is described at page 13, lines 1-7.

Claim 5 recites that step (e) determines said text criteria as criteria document textual material which is described at block 274 in Fig. 9A. The claim further recites that step (g1) of normalizing said criteria document textual material and (g2) fingerprinting the normalized criteria document textual material. These sub-steps are described at blocks 278 and 282 in Fig. 9A as described at page 19, lines 32-34 and page 20, line 1.

Claim 7 recites that step (i) displays the document symbols as squares. Such squares are illustrated, for example, at 24-28 in Fig. 2.

Claim 8 adds the steps (l) retrieving the identification of those documents resulting from the determination of step (k) and (m) viewing one or more of the documents identified at step (l) and determining the quality of the match thereof with said step (e) text criteria. These steps are described in connection with Fig. 9B at blocks 324 and 330.

Claim 9 adds a step (n) of identifying a new text criteria as a result of step (m) determination of an insufficient quality of the match. This is described in connection with block 336 at Fig. 9B. The claim further adds a step (o) of adding the identified new text criteria to the step (g) text criteria loaded into the positive designated one of the nodes. This is represented in Fig. 9B at arrow 298 which extends to block 274 of Fig. 9A. The claim further adds a step (p) of reiterating said steps (h) through (m) which is represented by arrows 296 and 276 in Fig. 9A.

Claim 10 adds steps (q) through (t). Step (q) provides that subsequent to said step (m), identifying and viewing at said display a list of features common to those documents, the identification of which was retrieved in step (l). This is described in connection with block 340 of Fig. 9B. Step (r) provides for identifying a new text criteria in correspondence with said step (q) identification and viewing at said display of said features common to those documents the identification of which was retrieved in step (l). This is described at Fig. 9B in connection with block 336. Step (s) provides for adding the identified new text criteria to the step (q) text criteria loaded into said positive designated one of said nodes. Again this is arrow 298 extending from block 336 to block 274 in Fig. 9A. Step (t) calls for reiterating said steps (h) through step (m) which is represented by arrow 276 in Fig. 9A.

Claim 11 adds sub-steps (k1) and (k2). Step (k1) recites determining additional text criteria where said document symbol locations are not likely to correspond with said text criteria determined at step (e). This is represented at blocks 290 in Fig. 9A and 294 in Fig. 9B. Step (k2) provides for adding additional text criteria to said text criteria determined at said step (e). This is represented at block 294 along with arrow 296 in Fig. 9B.

Claim 12 sets forth that said step (l) is carried out by drawing at said display of said net a boundary defining a region of said symbols. This is described in conjunction with block 312 in Fig. 9B and is described at lines 25-34 at page 20.

Looking to claim 13, a method incorporating the computer system with an interface and a display is set forth which generally is described in connection with Figs. 16A-16C and 17. Step (b) calls for the forming of one or more nets, each comprising at least two nodes associated by at least one interaction, one or more said nodes representing an evaluation criteria, said one or more nets being viewable at said display. Two nets, for example, as at 690 and 692 are illustrated in Fig. 16C. Step (c) calls for treating said documents to have an attribute value and calculating for each document a geometric relative distance with respect to the node criteria and displaying corresponding document symbols at said display. Document symbols have been illustrated, for example, in Fig. 2 at 24-28 and in Fig. 3 at 38-42. Such document symbols also are seen in Fig. 16C as small squares. Step (d) calls for delimiting at said display a first region of said document symbols. Such a region is created as represented at block 724 in Fig. 16A and one such region is represented at 706 in Fig. 16C. See additionally page 31, lines 27-29. Step (e) of the claim calls for delimiting at said display a second region of said document symbols. Such a region is illustrated, for example, at 708 in Fig. 16C and is described in connection with block 738 in Fig. 16A as set forth at lines 5-8 of page 32. Step (f) of the claim calls for selecting a said document attribute to be correlated and the criteria for establishing an attribute value match. It is generally described in Fig. 16A at blocks 752, 756 and 762 and is further described at lines 15-20 at page 32. At that descriptor, it is stated that it may be noted that experience with the method at hand resulted in an observation that the method may help entities organize data for putting it into a conventional relational database. Thus the method at hand may be considered as one which both evaluates and searches. Step (g) of the claim calls for determining the presence of one or more document attribute value match pairs as correlations between said first and second regions. In this regard, block 774 in Fig. 16B as described at lines 32-34 at page 32. Lastly, step (h) calls for displaying said correlations at said
display. This is described in connection with block 778 in Fig. 16B as further discussed in connection with line 34 at page 32 and line 1 of page 33. Note, additionally, line 710 in Fig. 16C.

Claim 14 recites that said step (d) provides a said first region extending over more than one said net and includes the step (d1) mapping said first region to a first document set by selecting the union or intersection or documents on different nets. in this regard, node block 732 in Fig. 16A as discussed in connection with lines 32-34 at page 31 and lines 1-3 of page 32.

Claim 15 is similar to claim 14 but looks to a second region that is discussed in connection with block 746 in Fig. 16A which is discussed at lines 10-13 at page 32.

Claim 16 describes that step (f) selects said criteria for establishing attribute value match by defining an attribute value tolerance. See in this regard, block 762 in Fig. 16A and lines 26-27 at page 32.

Claim 17 recites that said step (g) determines the presence of a document attribute match pair by determining whether the attribute value of a document in said first region is equal to the attribute value of a document in said second region within said attribute value tolerance. This is described in conjunction with block 774 in Fig. 16B as further elaborated upon at lines 32-34 at page 32.

Claim 18 recites that said step (d) is carried out by providing a computer generated line or lines visible at said display. In this regard, note line 706 in Fig. 16C.

Claim 19 similarly calls out that said step (e) is carried out by providing a computer generated line or lines visible at said display. In this regard, node line 708 in Fig. 16C.

Claim 20 provides that said step (h) is carried out by providing visible line at said display connecting two said symbols and representing said correlation. See in this regard, line 710 in Fig. 16C as well as block 778 in Fig. 16B as discussed at page 32, line 34 and page 33, lines 1-2.

Claim 21 provides that step (f) selects said document attribute or document identification as described in conjunction with block 752 in Fig. 16A and further sets forth that said step (g) identifies the same document in each said first and second region as a said correlation. Such a correlation line is represented at 710 in Fig. 16C extending between two document symbols at the two user delimited regions as described at page 31, lines 24-25.

Independent claim 22 looks in detail to the customized normalization procedure of the invention as described in connection with Fig. 11 and at page 22 commencing at line 6. Note that it is directed to a method for searching the text content of a document database. As before, steps (a) and (b) set forth the provision of a computer system with an interface and display and the identification of the population of documents to be searched. Step (c) and sub-steps (c1)-(c10) look in detail to the normalizing procedure. In this regard, sub-step (c1) provides for selecting character sequences that will separate words as set forth at block 354 in Fig. 11. Sub-step (c2) determines to either retain or eliminate punctuation characters as described in connection with block 358 in Fig. 11. Sub-step (c3) calls for setting regular expressions that will characterize numbers as described in connection with block 362 of Fig. 11. Sub-step (c4) provides for setting case behavior as discussed in conjunction with block 370 in Fig. 11. Sub-step (c5) provides for setting an offset and factor for numeric class which is described in connection with block 374 in Fig. 11. Sub-step (c6) provides for converting a document of said identified population to a character sequence which is described in connection with block 378 in Fig. 11. Sub-step (c7) sets forth accessing the words, or punctuation characters, W of said character sequences as described in connection with block 382 in Fig. 11. Sub-step (c8) recites

for each accessed W which is a number. converting such number into a sequence of word numbers, WN, and normalizing said word numbers for fingerprinting. This is described in connection with block 390 of Fig. 11 as well as lines 15-19 at page 23. Subset (c9) provides for marking the position and length of each W or normalized word number WN. This is described in connection with block 398 of Fig. 11. Sub-step (c10) sets forth that for each W or normalized WN, completing said normalization by reiterating steps (c8) and (c9). This is represented in Fig. 11 at arrow 408.

Step (d) calls for fingerprinting the normalized documents as described at block 214 in Fig. 9A.

Step (e) provides for forming one or more nets, each comprising at least two nodes, one or more said nodes representing an evaluation criteria, said one or more nets exhibiting two or more spaced apart nodes connected by one or more interactions. This has been described in connection with Figs. 2-5.

Step (f) sets forth that for each normalized document, calculating its geometric relative distance from a said node. This has been described in connection with block 286 of Fig. 9A.

Step (g) provides for displaying said one or more nets at said display in combination with one or more document symbols representing a said document located in correspondence with said calculated relative distance. Nets are illustrated in connection with Figs. 2-5. Note the document symbols 24-28 in Fig. 2 and 38-42 in Fig. 3.

Step (h) provides for determining from said document symbol locations at said display, if any, those documents which are more likely to correspond with said evaluation criteria. For example, document symbol 24 in Fig. 2 is likely to meet the criteria as is document symbol 38 shown in Fig. 3.

Claim 23, dependent upon claim 22 elaborates on step (c8). It is described in connection with Fig. 12, the description of which commences at page 23.

Step (c8.1) calls for converting any date characterized word number WN to a float or integer as set forth at block 424 and at page 24, line 1.

Step (c8.2) calls for applying an offset and factor to the word number WN to derive X. This is described in Fig. 12 at block 428 and at page 24, lines 2-5.

Step (c8.3) sets the range, R, as is described in connection with block 432.

Step (c84) provides for calculating a quantity as is described in connection with block 436 of Fig. 12. These blocks again are discussed in connection with the top of page 24.

Step (c8.5) calls for successively decrementing the value of range, R, and calculating the quantity, T, until, R, is equal to zero. This is generally discussed in connection with block 448 in Fig. 12 which is discussed in connection with lines 14-17 at page 24.

Step (c8.6) calls for designating S as the position of a significant numeral in, X, which is described in connection with block 454 in Fig. 12 and at lines 20-24 at page 24.

Step (c8.8) describes assigning each successive said numeral in, X, to a corresponding successive position, S, which is represented at arrow 472 in Fig. 12.

Claim 24, dependent upon claim 23 adds the step (c8.3.1) for setting precision, P, of the normalized word number WN as described at block 432 in Fig. 12 and further recites that step (c8.8) is carried out until the number of the said successive positions, S, deriving said second component equals the value of said precision, R, as is discussed in connection with block 462 in Fig. 12.

Grounds of Rejection to be Reviewed on Appeal

Whether claims 1-12 are unpatentable under 35 U.S.C. § 103(a) over Gallivan in view of Bluhm in view of Nevin.

Whether claims 13-21 are unpatentable under 35 U.S.C. §103(a) over Bluhm in view of Nevin.

Whether claims 22-24 are unpatentable under 35 U.S.C. §103(a) over Crooks, et al., in view of Nevin

Argument

I. Claims 1 -12 are patentable and not obvious over Gallivan in view of Bluhm in view of Nevin.

The above described February 2007 declaration is of particular importance in connection with all arguments herein presented inasmuch as all but portions of claims 1 and 2 have been rejected with the same earlier cited references and with essentially the same wording of rejection as presented in the second Office Action.

Claim 1

The Examiner has applied Gallivan with respect to steps (a) – (c), (e) and (f).

While Gallivan utilizes a computer system with a display and gathers documents from a data base into a system as set forth at steps (a) and (b), its similarity with the present method ends at that point. Step (c) calls for normalizing, however, the Gallivan normalization process is not for the purpose of searching but to grouping documents based on certain terms or phrases, such that documents under a common theme or concept will be clustered together, Gallivan is simply an approach to displaying documents with a common theme. Documents are clustered in terms of frequency of occurrence of an expression or word.

The Examiner then turns to step (e) of claim 1 determining a text criteria with respect to said document population. Gallivan pre-establishes a theme or concept with which to gather similar documents having the same theme within a cluster. By contrast, the nodes of the present invention may perform with documents of a variety of multiple concepts, thus normalization must be quite different. Following the precepts of Gallivan, the present method would be unworkable. The term "text" is defined at page 7 of the application and it is the criteria represented by that text that is loaded into a node to carry out iterative searching wherein a searching rule ultimately may be developed.

Next, the Examiner cites Gallivan with respect to step (f) forming a net comprising at least two nodes associated by at least one interaction and displayable at said display as two or more spaced apart nodes connected by an interaction. Gallivan is displaying clusters, not nodes as taught by the present invention and is not concerned with achieving an indication as how to improve a search based upon an initial answer which may be gotten. Where its no interaction in Gallivan, the lines drawn between clusters are merely to guide the eye. Bluhm is cited with respect to step (d). As set forth in ¶5 of the declaration of February, 2007. Bluhm describes a document management system providing for the storing and organization of documents. This management includes duplicate detection and an organization of documents based upon a fingerprint geared towards recognizing if two documents are likely to be identical and if they are similar within minor editorial changes that might move word positions. As noted at ¶6 of that declaration, by contrast, the claims and specification of the present application describe a

method for evaluating the text content of a document database wherein nets and document symbols are utilized initially to develop search questions or rules. That is the key to carrying out a good search and that's an important aspect of the subject matter of the claims at hand. The Examiner has applied Bluhm at column 26, line 8 through column 27, line 14 with respect to step (d) of claim 1 for fingerprinting. As set forth at ¶8 of the above-noted declaration, the fingerprinting described at the pertinent columns of Bluhm sets forth a word vector approach wherein the fingerprint - the word vector of the six most common words in a population - are combined with a document count and position vector and comparison is made to see if two documents are likely to be identical. The fingerprinting described in the present application is quite different. As set forth at ¶9 of the above declaration this word vector form of fingerprint would render following steps of claim 1, particularly steps (f) through (k) inoperable in that the entire document content must be fingerprinted in order to carry out such steps.

The Examiner has applied Nevin, with respect to step (g) – (k). As noted at ¶13 of the above declaration, Nevin provides a collection of nodes which are inter-associated by a relationship while the nodes of the present application are associated by an interaction, specifically, an effective force that attracts documents with related content. This is quite different from a relationship wherein the spacing and geometric location of nodes is important to the user as taught by Nevin. By contrast, as set forth at ¶14 of the above declaration, the spacing and geometric relationship of nodes in the nets of the present invention are entirely arbitrary and of no consequence.

Step (g) of claim 1 describes the loading of text criteria into at least one of the nodes and the Examiner has rejected that step with respect to ¶0081 of Nevin. As set forth at ¶15 of the above-noted declaration, Nevin describes an organization algorithm and not this text criteria which is utilized with a node to evolve a search question whereupon a search may then be undertaken.

Step (h) of claim 1 sets forth that for each document of the database, there is calculated geometric relative distance from a node to derive one or more node attractors. In rejecting the step, the Examiner has identified ¶¶0031 and 0185 of Nevin and has commented that the connection strength of the link from one node to another is considered to represent the "relative distance". As set forth at ¶17 of the above declaration, Nevin describes that predetermined attribute data is stored into nodes and these nodes are linked by relationships of variable lengths. By contrast, step (h) provides that for each document of a database its geometric relative distance from one or more nodes is calculated. There are no documents in Nevin by which such calculation may be carried out, Nevin teaching only graphics defining a relationship between nodes, not between a document and a node, it being reiterated that, by contrast, the graphics location of nodes in the present invention is merely a matter of convenience. In effect, the

Examiner is basing a rejection on the applicants own teachings, reading into Nevin what simply doesn't exist in Nevin.

Step (i) of claim 1 sets forth a displaying of the net at the display in combination with one or more document symbols, each representing a document located in correspondence with the calculated relative distance. With respect to this step, the Examiner has identified ¶¶0033, 0084 and Fig 2 of Nevin. As set forth in ¶19 of the above-noted declaration, there are no document symbols and calculated relative distance described or suggested in Nevin, which only describes a positioning and relative relationship between nodes. As set forth at ¶20 of the above-noted declaration, ¶0084 and Fig. 2 of Nevin represent an algorithm to determine what nodes belong together and once a net is developed by Nevin, that is the final result. That's it, he's finished. By contrast, in the instant application the net is merely a platform for organizing documents and, as noted, Nevin does not display document symbols or as much as consider such an arrangement. Step (j) of claim 1 provides for visually examining the display of the net and document symbols and the Examiner has identified ¶0084, lines 14-17 of Nevin with respect to this step. As set forth at ¶22 of the above-identified declaration, Nevin is irrelevant with respect to step (j) inasmuch as there are no documents in Nevin and there is no display of document symbols.

Step (k) of claim 1 provides for determining from the document symbol locations at the display, those documents, if any, which are more likely to correspond with the text criteria. The Examiner has identified ¶¶0313 and 0315 of Nevin with respect to this step commenting that the user determines which categories are considered to be good or bad. As set forth at ¶24 of the declaration of February, 2007, the pertinent paragraphs of Nevin have no applicability, there being no determination with respect to document symbol locations at the display and from those symbol locations determining if any are more likely to correspond with text criteria. There can be no way to equate step (k) with the teachings of Nevin. As before, the applicants are being rejected on their own teaching.

Claim 2

Claim 2, dependent upon claim 1 should be considered allowable for reasons given in connection with claim 1.

Claim 3

Claim 3 sets forth that step (g) loads the text criteria into a positive designated one of the nodes. The Examiner has indicated that the claim is described at ¶¶0031 and 0083, lines 4-14 of Nevin, commenting that data is stored in the nodes and that a node can have a positive position. As set forth at ¶26 of the above-noted declaration, the present invention has no concern with the position of nodes. The technique of Nevin is not concerned with whether a node is positive or negative and, in particular, positively or negatively attracting certain textual content in the sense of the present invention.

Claim 4

Claim 4 describes that step (f) forms the net as comprising a positive designated node and a null designated node connected by an interaction. The Examiner has cited Nevin at ¶¶0083, 0084, lines 4-14 and ¶0123. The Examiner states that the last node is used as the null node and the nodes are connected by lines to demonstrate an interaction.

As set forth at ¶28 of the above declaration, a null node in accordance with the invention, is a node which has no content in it and therefore attracts no documents at all. By contrast, Nevin describes that during data entry, if you don't identify the node you are interested in, the program, as a default convention, will put the argument on the last node. This has no resemblance to the utilization of a null node as taught in the present invention.

Claim 5

Claim 5 describes that step (e) determines the text criteria as criteria document textual material and the Examiner has cited column 6, lines 33-47 of Bluhm with respect to this component of the claim. As set forth at ¶29 of the above declaration, there is nothing in Bluhm that remotely suggests criteria document textual material which is used to evolve a search question as established in claim 1. As set forth at ¶30 of the above declaration, step (g1) normalizing said criteria document textual material is being identified by the Examiner with Bluhm at column 22, lines 40-44. There is no criteria document textual material as much as suggested in Bluhm, let alone its normalization. As noted at ¶31 of the above declaration, step (g2) for fingerprinting the normalized criteria document textual material is said to be seen in Bluhm at column 26, line 8 through column 27, line 14. As stated above, the type of fingerprinting set forth in detail in Bluhm is of a word vector type which would render subsequent steps from step (g) in claim 1 as being inoperative.

Claim 6

Claim 6 was indicated as being allowable subject being written in independent form. That step determines positive text criteria and negative text criteria with respect to a document population. As set forth at ¶32 of the above declaration, Nevin is not concerned with criteria employed initially to evolve a search question. Step (f) of claim 6 provides for the formation of a net comprising one or more positive designated nodes, one or more negative designated nodes and one or more interactions. As set forth at ¶33 of the declaration, Nevin does not use interactions between positive and negative nodes but uses relationships generally identified by node position and as noted above, the position of the nodes in the present invention is arbitrary.

Step (g) of claim 6 provides for loading of positive text criteria into positive designated nodes and negative text criteria into negative designated nodes. As set forth at ¶34 of the above declaration, while data might be stored in nodes, it is stored for a different purpose than

the present invention, the present invention storing text criteria to develop a question for a search.

Step (h) of claim 6 provides for the calculation for each document of the database, its geometric relative distance from both positive designated nodes and negative designated nodes. As set forth at ¶35 of the above declaration, the step at hand is one wherein this distance is calculated with respect to documents and nodes and not between nodes as described in Nevin. Nevin is not concerned with developing a question for carrying out a search nor a document organization technique, but a technique for graphically representing entity-relationship diagrams.

Claim 7

Claim 7, dependent upon claim 1, should be considered allowable for reasons given in connection with claim 1 and additionally because there are no document symbols in any of the references.

Claim 8

Step (l) of claim 8 provides for retrieving the identification of those documents resulting from step (k), and further, step (n) of that claim provides for reviewing one or more of the documents identified in step (l) and determining the quality of the match thereof with step (e) text criteria, the Examiner citing ¶¶0313 and 0315 of Nevin with respect to this step. As set forth at ¶37 of the above declaration, with respect to claim 8, the paragraphs of Nevin which have been cited have no relationship to documents, are not describing the same operation or even a similar operation and are not evaluating the quality of the match of documents with text criteria.

Claim 9

Step (n) of claim 9 provides for the identification of new text criteria as a result of step (m) determination of insufficient quality of match, step (o) of claim 9 provides for the adding of the identified new text criteria to the step (g) text criteria loaded in the positive node, and step (p) of claim 9 reiterates steps (h) through (m) and the Examiner has cited ¶¶0313 and 0315 of Nevin with respect to these steps.

As set forth at ¶39 of the above declaration with respect to claim 9, Nevin identifies the properties of nodes precisely and in advance whereas by contrast new text criteria with the present invention is determined to improve a search question and the developed new test criteria is loaded into the positive node, whereupon there is a reiteration of steps (h) through (m) and Nevin is not concerned with documents and steps constituting a searching of their contents or any other kind of interactive process.

Claim 10

Step (q) of claim 10 describes that subsequent to step (m) identifying and viewing at said display a list of features common to those documents, the identification of which was retrieved

in step (l); a step (r) identifying a new text criteria in correspondence with step (q) and viewing features common to those documents, the identification of which was retrieved in step (l); a step (s) of adding the identified new text criteria to the step (q) text criteria loaded into the positive node, and step (t) reiterating steps (h) through (m), and the examiner has cited ¶¶0313- 0316 of Nevin with respect to this claim.

As noted at ¶41 of the above declaration, claim 10 looks to the extraction of common features and an iterative process which functions to improve the development of a question for carrying out a search by improving a question or rule and Nevin has nothing to do with such document evaluation but does deal with similarities or relationships between nodes and not documents and interactions associated with nodes, and further there are no search related steps in Nevin and no criteria addition to improve the capabilities for carrying out a search and, lastly Nevin doesn't carry out steps (q) through (s) and certainly does not reiterate them as set forth at step (t).

Claim 11

Step (k1) of claim 11 provides for determining additional text criteria where the document symbol locations are not likely to correspond with such text criteria, and step (k2) provides for adding additional text criteria to the text criteria determined at step (e). The Examiner has cited ¶¶ 0313-0316 of Nevin with respect to this claim.

As noted at ¶43 of the above declaration, Nevin is not addressing the subject matter of documents nor the development of a question for search activity associated with documents nor does Nevin address the subject matter of adding additional text criteria to improve a question used for search.

Claim 12

Claim 12 provides that step (l) is carried out by drawing at the display of a net a boundary defining region of the document symbols and the Examiner has cited ¶0320 of Nevin with an indication that the boundary region is determined by the available screen space.

As set forth at ¶45 of the above declaration, Nevin at ¶0320 is describing the accommodation of a need for arithmetically changing the shape of a net within the space confines of the display. By contrast, claim 12 selects a grouping of documents by drawing boundaries on the display around document symbols. There are no document symbols in Nevin nor a technique for selecting them.

Claim 13 – 21 are patentable and unobvious over Bluhm in view of Nevin

Claim 13

Step (f) of claim 13 provides for selecting a document attribute to be correlated and the criteria for establishing an attribute value match. The Examiner has cited column 6, lines 33-47 of

Bluhm with respect to this step. As set forth at ¶47 of the above declaration, step (f) of claim 13 is associated with two delimited regions at the display that is further associated with step (g) determining value matched pairs, and column 6, lines 33-47 of Bluhm have nothing to do with the procedures of claim 13, Bluhm being concerned with database management and the partitioning of documents into one or more collections as opposed to the instant method wherein text search attributes are employed which are not database predetermined collections.

Step (g) of claim 13 provides for determining the presence of one or more document attribute value match pairs between first and second regions and the Examiner has cited the same column 6, lines 33-47 of Bluhm. As set forth at ¶48 of the above declaration, there are no document symbols in Bluhm and there are no regions in Bluhm and there are no document attribute value match pairs in Bluhm.

Step (b) of claim 13 provides for forming one or more nets, each comprising at least two nodes associated by at least one interaction, one or more of the nodes representing an evaluation criteria and one or more being viewable at the display, and the Examiner has cited Fig. 1 and ¶0081 of Nevin. As set forth at ¶49 of the above declaration, Nevin stores all of the data in nodes whereas document criteria are stored in the nodes of the instant invention and further with respect to the entirety of claim 13, there is nothing in Nevin describing how two nets would interact with each other, that is two nets are used together to do a searching feature that neither net could do alone. The searching feature in this case is the development of question which may be used to carry out a search.

Step (c) of claim 13 provides for treating the documents to have an attribute value and calculating for each document a geometric relative distance with respect to node criteria and displaying corresponding document symbols. The Examiner has cited ¶¶0031 and 0185 of Nevin, with respect to this step stating that the connection strength of the link from one node to another is considered to represent relative distance. As set forth in ¶51 of the above declaration, the Examiner's analysis of step (c) of claim 13 is incorrect for reasons stated above in the declaration and particularly because Nevin has nothing to do with document symbols nor calculation of relative distance of document symbols with respect to node criteria. There are no document symbols in Nevin.

Step (d) of claim 13 provides for delimiting at the display a first region of the document symbols, and the Examiner cites ¶0031 and Fig. 1 of Nevin with respect to this step, stating that linking the nodes together is considered to represent delimiting and the connection of node 1 to node 2 is considered to represent a first region. As provide at ¶53 of the above declaration, with respect to step (d) of claim 13 there is no concept of region at all in Nevin and the Examiner's observation that connecting two nodes together constitutes a region is simply

incorrect. The Examiners indication that linking nodes together represents delimiting is incorrect and there are no document symbols in Nevin to establish a delimited region.

Step (e) of claim 13 provides for delimiting at the display a second region of document symbols and the Examiner has applied the same rejection as provided with respect to step (d). As set forth at ¶54 of the above declaration, the applicants submit that there are no document symbols in Nevin, there are not two regions in Nevin which are delimited, and the linking of node 2 to node 3 does not constitute a region of document symbols.

Step (h) of claim 13 displays correlations as are developed in connection with step (g) as they exist between first and second regions. The Examiner has cited ¶0033 of Nevin, stating that the display of nodes based on a location calculated from force parameters is considered to represent displaying correlations. As set forth at ¶55 of the above declaration, the Examiner's statement is simply and totally incorrect. Nevin is concerned with entirely different subject matter where for correlation two or more nodes are bound in space is unrelated to the invention where correlation is concerned with showing how two nets work together to show how a set of documents are closely grouped within two or more organized systems (nets).

Claim 14

Claim 14 provides that step (d) provides a first region extending over more than one net and includes a step (d1) of mapping the first region to a first document set by selecting the union or intersection of documents on different nets. The Examiner has cited ¶0031 and Fig. 1 of Nevin without comment.

As set forth at ¶56 of the above declaration, there are no document symbols in Nevin, there is no development of a search question in Nevin, there is no first region in Nevin, there is no first region extending over more than one net in Nevin, there is no suggestion of mapping of the first region to a first document set by selecting the union or intersection of documents on different nets in Nevin.

Claim 15

Claim 15 is similar to claim 14 but provides the second region extending over more than one net and includes the step of mapping the second region to a second document set by selecting the union or intersection of documents on different nets. The Examiner has cited the same components of Nevin with respect to claim 14, and the same response provided with respect to claim 14 also applies to the rejection of claim 15 in that no regions over nets and no mapping by selecting the union or intersection of documents on different nets is so much as suggested in Nevin as set forth at ¶57 of the above declaration.

Claim 16

Claim 16 provides that step (f) selects said criteria for establishing attribute value match by defining an attribute value tolerance, and the Examiner has cited column 6, lines 33-47 of

Bluhm without comment. As set forth at ¶59 of the above declaration, as stated above, column 6, lines 33-47 of Bluhm has no relevance to establishing an attribute value by defining an attribute value tolerance and there is no suggestion whatsoever in Bluhm of employing tolerance for any purpose.

Claim 17

Claim 17, dependent upon claim 16 provides that step (g) determines the presence of a document attribute match pair by determining whether the attribute value of a document in said first region is equal to the attribute value of a document in saide second region within said attribute value tolerance. The Examiner has again referred to column 6, lines 33-47 of Bluhm with respect to this claim.

As set forth at ¶61 of the above declaration there are no first and second regions suggested in Bluhm, as is quite apparent there is no determination of the presence of a document attribute match pair between regions within an attribute value tolerance suggested in Bluhm as additionally discussed above in connection with claim 16.

Claim 18

Claim 18 recites that step (d) is carried out by providing a computer generated line or lines visible at the display, and the Examiner has cited ¶0083 of Nevin with respect to this claim.

As set forth at ¶63 of the above declaration claim 18 with respect to step (d) draws computer generated lines delimiting a first region of document symbols at the display. There are no document symbols nor are there regions suggested in Nevin, Nevin only describes the positioning of lines between nodes which basically are representations of some predetermined relationship between two nodes, an arrangement that has no relevance whatsoever to claim 18.

Claim 19

Claim 19 provides that step (e) delimits a second region of document symbols by providing a computer generated line or lines visible at the display, and the Examiner has cited ¶0083 of Nevin. As set forth in ¶64 of the above declaration as discussed in connection with claim 18, Nevin provides a line which basically is a representation of some predetermined relationship between two nodes which has no suggestion of delimiting a second region of document symbols as well as no suggestion of document symbols at all, and no suggestion of delimiting by computer generated lines about these document symbols.

Claim 20

Claim 20 provides that step (h) is carried out by providing a visible line at the display connecting two document symbols and representing the correlation developed in connection with step (g) of claim 13. The Examiner has cited ¶0083 of Nevin with respect to this claim. As set forth at ¶65 of the above declaration, the commentary given above in connection with claims

18 and 19 applies, but now with respect to providing a visible line between two document symbols representing a correlation, the present invention having document symbols and nodes, Nevin having only nodes.

Claim 21

Claim 21 provides that step (f) selects said document attribute to be correlated and the criteria for establishing an attribute value match through selecting the document attribute or document identification and step (g) identifies the same document in each of the first and second regions as a correlation. The Examiner has cited ¶¶0093, lines 4-7 and 0094 of Nevin in rejecting this claim.

As set forth at ¶67 of the above declaration, claim 21 looks to see where a particular document symbol appears in two different kinds of organizations, and Nevin concerns no document symbols, no regions and provides no discussion of correlation but only the relationship between nodes, not document symbols.

Claims 22-24 are patentable and unobvious over Crooks, et al., in view of Nevin

Claim 22

As set forth at ¶69 of the above declaration, Crooks, et al., is an approach wherein there is parsing of a health care order based on the parsing identification and interpretation of specific keywords, terms and abbreviations, wherein essentially a string-based order is parsed and "normalized", *e.g.*, matched and replaced input with actual terms, to determine specific components such as drug dosage whereupon a distance is assigned using the well-known technique which identifies how many character changes had to be made to achieve a match with the rule-based database. Crooks, et al., is not fingerprinting nor comparing fingerprints or employing interactivity or a graphical component.

As set forth at ¶70 of the above declaration with respect to step (b) of claim 22 identifying the population of documents to be searched, there is no search of documents in Crooks, et al., but there is a search of a database of rules and only for the purpose of interpreting a medical order, no attempt being made to search for a document, or place the document in any type taxonomy.

As set forth at ¶71 of the above declaration step (c5) provides for setting an offset and factor for numeric class, for instance, determining whether a number is within a particular range, the step representing an aspect of achieving a representation of text which is searchable as opposed to Crooks, et al., an approach which seeks an accurate grammatical representation.

As set forth at ¶72 of the above declaration step (c8) provides that for each accessed, W, which is a number, converting such a number into a sequence of word numbers, WN, and normalizing these word numbers for fingerprinting, the Examiner citing ¶0024, lines 1-28 of Crooks, et al. Crooks, et al., has nothing comparable to normalizing word numbers as, WN.

As set forth at ¶73 of the above declaration, step (c9) of claim 22 provides for marking the position and link of each, W, or normalized word number, WN, and the Examiner has cited ¶0026, lines 31 *et seq.*, of Crooks, et al.

As set forth at ¶74 of the above declaration, Crooks, et al., at the above cited paragraph and lines is concerned with an attempt to find an approximate match with the rule database, when an exact one cannot be found, the number of letters required to be changed to match a rule term in the database representing a distance, and such an approach has no relationship to the recitation of step (c9).

Step (c10) of claim 22 provides that for each, W, or normalized, WN, completing the normalization by reiterating steps (c8) and (c9), and the Examiner has cited paragraph 0026, lines 10-12 of Crooks, et al., with the commentary that refining is considered to represent repeating.

As set forth at ¶76 of the above declaration with respect to the Examiner's commentary concerning step (c10) and the term "refining", the present invention is doing an iterative process to achieve optimal normalization while Crooks, et al., strives to obtain word matches and then refine by eliminating the junk, and there is no relationship between these methods nor their purpose.

Step (d) of claim 22 provides for fingerprinting the normalized documents. The Examiner has cited ¶¶24-26 of Crooks, et al., with respect to this step. As set forth at ¶77 of the above declaration, there is no fingerprinting whatsoever taught by Crooks, et al.

Step (e) of claim 22 provides for forming one or more nets each comprising at least two nodes, one or more said nodes representing an evaluation criteria, said one or more nets exhibiting two or more spaced apart nodes connected by one or more interactions. The Examiner has cited Fig. 1 of Nevin with respect to this step. As set forth at ¶78 of the above declaration, the applicants reiterate the commentary made in connection with claim 1 at step (f).

Step (f) of claim 22 provides that for each normalized document, calculating its geometric distance from a said node. With respect to this step the Examiner repeats the rejection made in connection with step (h) of claim 1. As set forth at ¶79 of the above declaration, the applicants reassert their response concerning step (h) of claim 1.

Step (g) of claim 22 provides for displaying one or more nets at the display in combination with one or more document symbols representing a said document located in correspondence with said calculated relative distance. The Examiner has cited the same component of Nevin as cited with respect to step (i) of claim 1. As set forth at ¶80 of the above declaration, the applicants reassert their response to that rejection in response to this rejection.

The final step of claim 22 provides for determining from said document symbol locations at said display, if any, those documents which are more likely to correspond with said evaluation

criteria. With respect to this paragraph, the Examiner repeats the rejection asserted in connection with step (k) of claim 1. As set forth at ¶81 of the above declaration, the applicants repeat the argument set forth at claim 1.

Claim 23

Claim 23 has been indicated as being allowable subject to being written in independent form. Claim 23 provides for steps (c8.1) through (c8.8) describing in detail step (c8) of claim 22. As set forth at ¶82 of the above declaration, Crooks, et al., neither carries out nor suggests any of these steps.

As set forth at ¶83 of the above declaration more specifically with respect to claim 23, step (c8.1), Crooks, et al., merely determines the presence of a date and uses it directly while the present step is developing a record that can be used for searching, Crooks, et al., carrying out no conversion to a float or integer. With respect to step (c8.2), applying an offset and factor to improve fingerprinting, Crooks, et al., does not carry out fingerprinting whatsoever. As set forth at ¶84 of the above declaration with respect to steps (c8.3)–(c8.8), there is no similarity or purpose in any way related to the teachings of Crooks, et al.

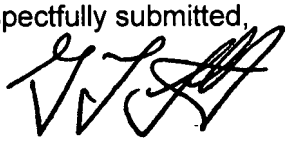
Claim 24

Claim 24 has been considered allowable subject to being rewritten in independent form. The claim describes that step (c8.3) further comprises the step (c8.3.1) setting the precision of, P, the normalized word number, WN, and step (c8.8) is carried out until the number of said successive positions, S, deriving said second component equal the value of said precision, R. As set forth at ¶86 of the above declaration, Crooks, et al., is not utilizing precision, presumably for good reason, that one would not wish to use that approach in dealing with medical applications and both components of this claim utilize a precision function.

Conclusion

Accordingly, Appellants respectfully urge the Board to overrule the rejection of the appealed claims and to permit the appealed application to pass to issue.

Respectfully submitted,



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Claims Appendix

1. A method for evaluating the text content of a document database with respect to a document population, comprising the steps of:

(a) providing a computer system having a user interface with a display;

(b) gathering documents from said database into said system;

(c) normalizing said gathered documents;

(d) fingerprinting said gathered documents;

(e) determining a text criteria with respect to said document population;

(f) forming a net comprising at least two nodes associated by at least one interaction and displayable at said display as two or more spaced apart nodes connected by an interaction;

(g) loading said text criteria into at least one of said nodes;

(h) for each document of said database, calculating its geometric relative distance from a said node to derive one or more node attractors;

(i) displaying said net at said display in combination with one or more document symbols each representing a said document located in correspondence with said calculated relative distance;

(j) visually examining the display of said net and document symbols; and

(k) determining from said document symbol locations at said display those documents, if any, which are more likely to correspond with said text criteria.

2. The method of claim 1 in which:

said step (f) forming a net provides for the display of said net as having said nodes defined as circles and said interaction defined as a line extending between said circles.

3. The method of claim 1 in which:

said step (g) loads said text criteria into a positive designated one of said nodes.

4. The method of claim 1 in which:

said step (f) forms said net as comprising a said positive designated node and a null designated node connected by a said interaction.

5. The method of claim 1 in which:

said step (e) determines said

text criteria as criteria document textual material; and

said step (g) comprises the steps:

(g1) normalizing said criteria document textual material; and

(g2) fingerprinting the normalized criteria document textual material.

6. The method of claim 1 in which:

said step (e) determines a positive text criteria and a negative text criteria with respect to said document population;

said step (f) forms a net comprising one or more positive designated nodes, one or more negative designated nodes and one or more interactions;

said step (g) loads said positive text criteria into said one or more positive designated nodes, and said negative text criteria into said one or more negative designated nodes; and

said step (h) calculates, for each document of said database its geometric relative distance from both said positive designated node and said negative designated node.

7. The method of claim 1 in which:

said step (i) displays said one or more document symbols as squares.

8. The method of claim 1 including the steps:

(l) retrieving the identification of those documents resulting from the determination of step (k);

(m) viewing one or more of the documents identified in step (l) and determining the quality of the match thereof with said step (e) text criteria.

9. The method of claim 8 further comprising the steps:

(n) identifying a new text criteria as a result of a said step (m) determination of an insufficient said quality of said match;

(o) adding the identified new text criteria to the step (g) text criteria loaded into said positive designated one of said nodes; and

(p) reiterating said steps (h) through (m).

10. The method of claim 8 further comprising the steps:

(q) subsequent to said step (m), identifying and viewing at said display a list of features common to those documents the identification of which was retrieved in step (l);

(r) identifying a new text criteria in correspondence with said step (q) identification and viewing at said display of said features common to those documents the identification of which was retrieved in step (l);

(s) adding the identified new text criteria to the step (q) text criteria loaded into said positive designated one of said nodes; and

(t) reiterating said steps (h) through step (m).

11. The method of claim 1 in which:

said step (k) further comprises the steps:

(k1) determining additional text criteria where said document symbol locations are not likely to correspond with said text criteria determined at step (e); and

(k2) adding said additional text criteria to said text criteria determined at said step (e).

12. The method of claim 8 in which:

said step (l) is carried out by drawing at said display of said net a boundary defining a region of said symbols.

13. A method for evaluating the text content of a document database with respect to a population of documents. comprising the steps of:

(a) providing a computer system having a user interface with a display;

(b) forming one or more nets each comprising at least two nodes associated by at least one interaction, one or more said nodes representing an evaluation criteria, said one or more nets being viewable at said display;

(c) treating said documents to have an attribute value and calculating for each document a geometric relative distance with respect to a said node criteria and displaying corresponding document symbols at said display;

(d) delimiting at said display a first region of said document symbols;

(e) delimiting at said display a second region of said document symbols;

(f) selecting a said document attribute to be correlated and the criteria for establishing an attribute value match;

(g) determining the presence of one or more document attribute value match pairs as correlations between said first and second regions; and

(h) displaying said correlations at said display.

14. The method of claim 13 in which:

said step (d) provides a said first region extending over more than one said net; and includes the step:

(d1) mapping said first region to a first document set by selecting the union or intersection of documents on different nets.

15. The method of claim 13 in which:

said step (e) provides a said second region extending over more than one said net; and including the step:

(e1) mapping said second region to a second document set by selecting the union or intersection of documents on different nets.

16. The method of claim 13 in which:

said step (f) selects said criteria for establishing an attribute value match by defining an attribute value tolerance.

17. The method of claim 16 in which:

said step (g) determines the presence of a document attribute match pair by determining whether the attribute value of a document in said first region is equal to the attribute value of a document in said second region within said attribute value tolerance.

18. The method of claim 13 in which:

said step (d) is carried out by providing a computer generated line or lines visible at said display.

19. The method of claim 13 in which:

said step (e) is carried out by providing a computer generated line or lines visible at said display.

20. The method of claim 13 in which:

said step (h) is carried out by providing visible line at said display connecting two said symbols and representing said correlation.

21. The method of claim 13 in which:

said step (f) selects said document attribute or document identification; and

said step (g) identifies the same document in each said first and second region as a said correlation.

22. A method for searching the text content of a document database with respect to a population of documents, comprising the steps of:

(a) providing a computer system having a user interface with a display;

(b) identifying the population of documents to be searched;

(c) normalizing the documents of the identified population with the steps comprising;

(c1) selecting character sequences that will separate words,

(c2) determining to either retain or eliminate punctuation characters,

(c3) setting regular expressions that will characterize numbers,

(c4) setting case behavior,

(c5) setting an offset and factor for numeric class,

(c6) converting a document of said identified population to a character sequence,

(c7) accessing the words, or punctuation characters, W of said character sequences,

(c8) for each accessed W which is a number, converting such number into a sequence of word numbers, WN, and normalizing said word numbers for fingerprinting,

(c9) marking the position and length of each W or normalized word number WN,

(c10) for each W or normalized WN, completing said normalization by reiterating steps (c8) and (c9);

(d) fingerprinting said normalized documents;

(e) forming one or more nets, each comprising at least two nodes, one or more said nodes representing an evaluation criteria, said one or more nets exhibiting two or more spaced apart nodes connected by one or more interactions;

(f) for each normalized document, calculating its geometric relative distance from a said node;

(g) displaying said one or more nets at said display in combination with one or more document symbols representing a said document located in correspondence with said calculated relative distance; and

determining from said document symbol locations at said display, if any, those documents which are more likely to correspond with said evaluation criteria.

23. The method of claim 22 in which said step (c8) further comprises the steps:

(c81) convert any date characterized word number WN to a float or integer,

(c8.2) applying an offset and factor to the word number WN to derive X,

(c8.3) set the range, R,

(c8.4) calculate the quantity $T = (\log_{10}X)/R$,

(c8.5) successively decrementing the value of range, R and calculating the quantity, T until R is equal to zero,

(c8.6) designating S as the position of a significant numeral in X,

(c8.7) assigning each successive quantity T to a corresponding successive position S to derive the first component of normalized word number WN; and

(c8.8) subsequent to said step (c8.7), assigning each successive said numeral in X to a corresponding successive position S to derive a second component of said normalized word number, WN.

24. The method of claim 23 in which:

said step (c8.3) further comprises the step: (c8.3.1) setting the precision P of the normalized word number WN,

said step (c8.8) is carried out until the number of said successive positions S deriving said second component equals the value of said precision, R.

Evidence Appendix

Declaration Under 37 CFR 1.132 submitted 02-21-2007, entered 05-17-2007

Declaration Under 37 CFR 1.132 submitted 08-15-2006, entered 11-15-2006

Attorney Docket No.: DMJ 2-002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
Dumont M. Jones)
Serial No.: 10/706,352) Examiner Kimberly M. Lovel
Filed: November 12, 2003) Group Art Unit 2167
For: "Document Search Method With Interactively Employed Distance Graphics Display")

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DECLARATION UNDER 37 CFR 1.132

Dumont M. Jones and Vadim M. Koganov declare as follows:

1) That they are the inventors named in the above-identified application for United States patent;

2) That their curriculums vitae are annexed hereto as an Exhibit A;

3) That they have reviewed a second Office Action developed in connection with the above-identified application which was mailed November 15, 2006;

4) That claims 1-21 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,085,755 to Bluhm, et al., (hereinafter Bluhm) in view of United States Patent Application publication No.US2005/0086238 by Nevin, III (hereinafter Nevin);

5) That Bluhm describes a document management system providing for the storage and organization of documents, such management including duplicate detection and an organization of documents based upon attributes organized on what is referred to as a fingerprint of a variety which is sometimes referred to as a word vector;

6) That by contrast, the claims and specification of the present application describe a method for evaluating the text content of a document database wherein nets and document symbols are utilized initially to develop search questions or rules, whereupon the steps of a searching procedure are carried out utilizing the earlier-developed questions or rules;

7) That the Examiner has applied Bluhm at column 26, line 8 through column 27 line 14 with respect to step (d) of claim 1 for fingerprinting said gathered documents;

8) That the fingerprinting described at the pertinent columns of Bluhm sets forth a word vector approach where six most common words in a population are combined with a word count vector and comparison is made to see if two documents are likely to be identical, and that the fingerprinting described in their application is quite different;

9) That this word vector form of fingerprint would render the remaining steps of claim 1 inoperable in that the entire document content must be fingerprinted in order to carry out subsequent steps (h) – (k);

10) That the Examiner has cited column 6, lines 33-47 with respect to step (e) of claim 1 for determining a text criteria with respect to said document population;

11) That the cited column and lines are not relevant to text criteria, the lines describing that documents can be stored in aggregations or collections, whereas the text criteria recited in the step is later evaluated and treated, for instance, in an iterative sense to develop a question or questions to be employed in subsequent searching;

12) That step (f) of claim 1 describes forming a net comprising at least two nodes associated by at least one interaction displayable at the display as two or more spaced apart nodes connected by an interaction, and the Examiner has identified Fig. 1 in Nevin as representing this net;

13) That Nevin provides a collection of nodes which are inter-associated by a relationship while the nodes of the present application are associated with an interaction, specifically, an effective force that attracts documents with related content which is quite different from the relationship wherein the spacing and geometric location of nodes is important to the user;

14) That the spacing and geometric relationship of nodes in the nets of the present invention are entirely arbitrary and of no consequence;

15) That step (g) of claim 1 describes the loading of text criteria into at least one of the nodes, the Examiner rejecting that step with respect to paragraph 0081 of Nevin which describes an organization algorithm and not this text criteria which is utilized with a node to evolve a search question whereupon a search may be undertaken;

16) That step (h) of claim 1 sets forth that for each document of the database, there is calculated geometric relative distance from a node to derive one or more node attractors, and in rejecting this step the Examiner has identified paragraphs 0031 and 0185 of Nevin and commented that the connection strength of the link from one node to another is considered to represent the "relative distance";

17) That Nevin describes that predetermined attribute data is stored into nodes and these nodes are linked by relationships of variable lengths whereas step (h) provides that for

each document of a database its geometric relative distance from one or more nodes is calculated and that there are no documents in Nevin by which such calculation may be carried out, Nevin teaching only graphics defining a relationship between nodes, not between a document and a node, it being reiterated that by contrast the graphics location of nodes in the present invention is merely a matter of convenience;

18) That step (i) of claim 1 sets forth a displaying of the net at the display in combination with one or more document symbols each representing a document located in correspondence with the calculated relative distance, the Examiner identifying paragraphs 0033, 0084 and Fig. 2 of Nevin with respect to this step;

19) That there are no document symbols and calculated relative distance described or suggested in Nevin, which only describes a positioning and relative relationship between nodes;

20) That paragraph 0084 and Fig. 2 of Nevin represent an algorithm to determine what nodes belong together and once a net is developed by Nevin that is the final result, whereas by contrast, in the instant application the net is merely a platform for organizing documents and, as noted, Nevin does not display document symbols or as much as consider such an arrangement;

21) That step (j) of claim 1 provides for visually examining the display of the net and document symbols and this step is identified as being revealed at paragraph 0084, lines 14-17 in Nevin;

22) That Nevin is irrelevant with respect to step (j) inasmuch as there are no documents in Nevin and there is no display of document symbols;

23) That step (k) of claim 1 provides for determining from the document symbol locations at the display, those documents, if any, which are more likely to correspond with said text criteria and the Examiner has identified paragraphs 0313 and 0315 of Nevin commenting that the user determines which categories are considered to be good or bad;

24) That with respect to step (k) of claim 1, paragraphs 0313 and 0315 of Nevin have no applicability, there being no determination with respect to document symbol locations at the display and from those symbol locations determining if any are more likely to correspond with text criteria and that there can be no way to equate step (k) with Nevin;

25) That claim 3 sets forth that step (g) loads the text criteria into a positive designated one of the nodes and the Examiner has indicated that the claim is described at paragraphs 0031 and 0083, lines 4-14 of Nevin, commenting that data is stored in the nodes and that a node can have a positive position;

26) That as noted above, the present invention has no concern with the position of nodes, the technique of Nevin is not concerned with whether a node is positive or negative and, in particular, positively or negatively attracting certain textual content in the sense of the present invention;

27) That claim 4 describes that step (f) forms the net as comprising a positive designated node and a null designated node connected by an interaction and the Examiner, citing Nevin at paragraphs 0083, 0084, lines 4-14 and 0123 states that the last node is used as the null node and the nodes are connected by lines to demonstrate an interaction;

28) That a null node in accordance with the invention is a node which has no content in it and therefore attracts no documents at all whereas Nevin describes that, during data entry if you don't identify the node you are interested in, the program as a default convention will put the argument on the last node and that this has no resemblance to the utilization of a null node as taught in the present invention;

29) That claim 5 describes that said step (e) determines said text criteria as criteria document textual material and the Examiner has cited column 6, lines 33-47 of Bluhm with respect to this component of the claim and that there is nothing in Bluhm that remotely suggests criteria document textual material which is used to evolve a search question as established in claim 1;

30) That step (g1) normalizing said criteria document textual material is being identified by the Examiner with Bluhm at column 22, lines 40-44 and there is no criteria document textual material as much as suggested in Bluhm, let alone its normalization;

31) That step (g2) for fingerprinting the normalized criteria document textual material is said to be seen in Bluhm at column 26, line 8 through column 27, line 14 and that, as stated above, the type of fingerprinting set forth in detail in Bluhm is of a word vector type which would render the subsequent steps from step (g) in claim 1 as inoperative;

32) That claim 6 provides that step (e) determines positive text criteria and negative text criteria with respect to a document population, the Examiner citing Nevin paragraph 0084, lines 4-14 and that Nevin is not concerned with criteria employed initially to evolve a search question and then carry out the steps of a search as set forth in the remaining steps of claim 1;

33) That step (f) of claim 6 provides for the formation of a net comprising one or more positive designated nodes, one or more negative designated nodes and one or more interactions, the Examiner citing paragraph 0084 of Nevin, lines 4-14 and as discussed above, Nevin does not use interactions between positive and negative nodes but uses

relationships generally identified by node position and again as noted above, the position of the nodes with the present invention is arbitrary;

34) That step (g) of claim 6 provides for the loading of positive text criteria into positive designated nodes and negative text criteria into negative designated nodes, and the Examiner has cited paragraph 0031 of Nevin and indicated that data is stored in the nodes, and while data might be stored in nodes, it is stored for a different purpose than the present invention, the present invention storing text criteria to develop a question for a search;

35) That step (h) of claim 6 provides for the calculation for each document of the database, its geometric relative distance from both positive designated nodes and said negative designated nodes and the Examiner has cited paragraphs 0031 and 0185 of Nevin commenting that the connection strength of the link from one node to another is considered to represent relative distance and the Examiner fails to observe that the step at hand is one wherein this distance is calculated with respect to documents and nodes and not between nodes as described in Nevin, Nevin not being concerned with developing a question for carrying out a search, nor a document organization technique, but a technique for graphically representing entity-relationship diagrams;

36) That step (l) of claim 8 provides for retrieving the identification of those documents resulting from step (k), and further, step (m) of that claim provides for reviewing one or more of the documents identified in step (l) and determining the quality of the match thereof with step (e) text criteria, and the Examiner has cited paragraphs 0313 and 0315 of Nevin with respect thereto;

37) That with respect to claim 8, the paragraphs of Nevin which have been cited have no relationship to documents, are not describing the same operation or even a similar operation and are not evaluating the quality of the match of documents with text criteria;

38) That step (n) of claim 9 provides for the identification of new text criteria as a result of step (m) determination of insufficient quality of match, step (o) of claim 9 provides for the adding of the identified new text criteria to the step (g) text criteria loaded in the positive node, and step (p) of claim 9 reiterates steps (h) through (m), the Examiner citing paragraphs 0313 and 0315 of Nevin;

39) That with respect to claim 9, Nevin identifies the properties of nodes precisely and in advance whereas by contrast new text criteria with the present invention is determined to improve a search question and the developed new test criteria is loaded into the positive node whereupon there is a reiteration of steps (h) through (m) and Nevin is not

concerned with documents and the steps constituting a searching of their contents or any other kind of interactive process;

40) That step (q) of claim 10 describes that subsequent to step (m) an identifying and viewing at said display a list of features common to those documents, the identification of which was retrieved in step (s), a step (r) identifying a new text criteria in correspondence with step (q) and viewing features common to those documents, the identification of which was retrieved in step (l), a step (s) of adding the identified new text criteria to the step (q) text criteria loaded into the positive node, and step (t) reiterating steps (h) through (m), the Examiner citing paragraphs 0313 - 0316 of Nevin;

41) That claim 10 looks to the extraction of common features and an iterative process which functions to improve the development of a question for carrying out a search by improving a question or rule and Nevin has nothing to do with such document evaluation but does deal with similarities or relationships between nodes and not documents and interactions associated with nodes, and further there are no search steps in Nevin and no criteria addition to improve the capabilities for carrying out a search and lastly Nevin doesn't carry out steps (q) through (s) and certainly does not reiterate them as set forth at step (t);

42) That step (k1) of claim 11 provides for determining additional text criteria where the document symbol locations are not likely to correspond with such text criteria, and step (k2) provides for adding additional text criteria to the text criteria determined at step (e), the Examiner citing paragraphs 0313-0316 of Nevin;

43) That with respect to claim 11, Nevin is not addressing the subject matter of documents nor the development of a question for search activity associated with documents nor does Nevin address the subject matter of adding additional text criteria to improve a question used for search;

44) That with respect to claim 12, step (l) is carried out by drawing at the display of a net a boundary defining region of the document symbols, the Examiner citing paragraph 0320 of Nevin and indicating that the boundary region is determined by the available screen space;

45) That Nevin at paragraph 0320 is describing the accommodation of a need for arithmetically changing the shape of a net within the space confines of the display, whereas claim 12 selects a grouping of documents by drawing boundaries on the display around document symbols, there are no document symbols in Nevin nor a technique for selecting them;

46) That step (f) of claim 13 provides for selecting a document attribute to be correlated and the criteria for establishing an attribute value match, and the Examiner cites column 6, lines 33-47 presumably of Bluhm;

47) That step (f) of claim 13 is associated with two delimited regions at the display that is further associated with step (g) determining value matched pairs, and column 6, lines 33-47 of Bluhm have nothing to do with the procedures of claim 13, Bluhm being concerned with database management and the partitioning of documents into one or more collections as opposed to the instant method wherein text search attributes are employed which are not database predetermined collections;

48) That step (g) of claim 13 provides for determining the presence of one or more document attribute value match pairs between first and second regions and the Examiner has cited the same column 6, lines 33-47 of Bluhm and there are no document symbols in Bluhm and there are no regions in Bluhm and there are no document attribute value matched pairs in Bluhm;

49) That step (b) of claim 13 provides for forming one or more nets, each comprising at least two nodes associated by at least one interaction, one or more of the nodes representing an evaluation criteria and one or more being viewable at the display, and the Examiner has cited Fig. 1 and paragraph 0081 of Nevin, and Nevin stores all of the data in nodes whereas document criteria are stored in the nodes of the instant invention and further with respect to the entirety of claim 13 there is nothing in Nevin describing how two nets would interact with each other, that is two nets are used together to do a searching feature that neither net could do alone;

50) That step (c) of claim 13 provides for treating the documents to have an attribute value and calculating for each document a geometric relative distance with respect to node criteria and displaying corresponding document symbols, the Examiner citing paragraphs 0031 and 0185 of Nevin, stating that the connection strength of the link from one node to another is considered to represent relative distance;

51) That the Examiner's analysis of step (c) of claim 13 is incorrect for reasons above stated and particularly because Nevin has nothing to do with document symbols nor calculation of relative distance of document symbols with respect to node criteria;

52) That step (d) of claim 13 provides for delimiting at the display a first region of the document symbols, and the Examiner cites paragraph 0031 and Fig. 1 of Nevin stating that linking the nodes together is considered to represent delimiting and the connection of node 1 to node 2 is considered to represent a first region;

53) That with respect to step (d) of claim 13 there is no concept of region at all in Nevin and the Examiner's observation that connecting two nodes together constitutes a region is simply incorrect, and the Examiners indication that linking the nodes together represents delimiting is incorrect and there are no document symbols in Nevin to establish a delimited region;

54) That step (e) of claim 13 provides for delimiting at the display a second region of document symbols and the Examiner has applied the same rejection as provided with step (d) and the Applicants submit that there are no document symbols in Nevin, there are not two regions in Nevin which are delimited, and the linking of node 2 to node 3 does not constitute a region of document symbols;

55) That step (h) of claim 13 displays correlations as are developed in connection with step (g) as they exist between first and second regions, and the Examiner's commentary citing paragraph 0033 of Nevin, stating that the display of nodes based on a location calculated from force parameters is considered to represent displaying correlations is simply and totally incorrect, Nevin being concerned with entirely different subject matter where for correlation two or more nodes are bound in space is unrelated to the invention where correlation is concerned with showing how two nets work together to show how a set of documents are closely grouped within two or more organization systems (nets);

56) That claim 14 provides that step (d) provides a first region extending over more than one net and includes a step (d1) of mapping the first region to a first document set by selecting the union or intersection of documents on different nets, and the Examiner has cited paragraph 0031 and Fig. 1 of Nevin without comment and there are no document symbols in Nevin, there is no development of a search question in Nevin, there is no first region in Nevin, there is no first region extending over more than one net in Nevin, there is no suggestion of mapping of the first region to a first document set by selecting the union or intersection of documents on different nets in Nevin;

57) That claim 15 is similar to claim 14 but provides the second region extending over more than one net and includes the step of mapping the second region to a second document set by selecting the union or intersection of documents on different nets, and the Examiner has cited the same components of Nevin, and the same response provided with respect to claim 14 also applies to claim 15 in that no regions over nets, and no mapping by selecting the union or intersection of documents on different nets is so much as suggested in Nevin;

58) That claim 16 provides that step (f) selects the criteria for establishing attribute value match by defining an attribute value tolerance, and the Examiner has cited column 6, lines 33-47 of Bluhm without comment;

59) That as stated above, column 6, lines 33-47 of Bluhm has no relevance to establishing an attribute value match by defining an attribute value tolerance and there is no suggestion whatsoever in Bluhm of employing tolerance for any purpose;

60) That claim 17, dependent upon claim 16 provides that step (g) determines the presence of a document of an attribute matched pair by determining whether the attribute value of a document in the first region is equal to the attribute value of a document in the second region within the attribute value tolerance, and the Examiner has again referred to column 6, lines 33-47 of Bluhm;

61) That there are no first and second regions suggested in Bluhm, as is quite apparent there is no determination of the presence of a document attribute matched pair between regions within an attribute value tolerance as additionally discussed above in connection with claim 16;

62) That claim 18 recites that step (d) is carried out by providing a computer generated line or lines visible at the display, and the Examiner has cited paragraph 0083 of Nevin;

63) That claim 18 with respect to step (d) draws computer generated lines delimiting a first region of document symbols at the display, that there are no document symbols nor are there regions suggested in Nevin, Nevin only describing the positioning of lines between nodes which basically are representations of some predetermined relationship between two nodes, an arrangement that has no relevance to claim 18;

64) That claim 19 provides that step (e) delimits a second region of document symbols by providing a computer generated line or lines visible at the display, and the Examiner has cited paragraph 0083 of Nevin which, as discussed in connection with claim 18 provides a line which basically is a representation of some predetermined relationship between two nodes which has no suggestion of delimiting a second region of document symbols as well as no suggestion of document symbols at all, and no suggestion of delimiting by computer generated lines about these document symbols;

65) That claim 20 provides that step (h) is carried out by providing a visible line at the display connecting two document symbols and representing the correlation developed in connection with step (g) of claim 13 and the Examiner has cited paragraph 0083 of Nevin and, thus, the commentary given above in connection with claims 18 and 19 applies, but now with respect to providing a visible line between two document symbols

representing a correlation, the present invention having document symbols and nodes, Nevin having only nodes;

66) That claim 21 provides that step (f) selects said document attribute to be correlated and the criteria for establishing an attribute value match through selecting the document attribute or document identification and step (g) identifies the same document in each of the first and second regions as a correlation and the Examiner has cited paragraph 0093, lines 4-7 and 0094 of Nevin in carrying out the rejection;

67) That claim 21 looks to see where a particular document symbol appears in two different kinds of organizations, and Nevin concerns no document symbols, no regions and provides no discussion of correlation but only the relationship between nodes, not document symbols;

68) That they observe that claims 22-24 have been rejected under §103 of the Patent Statute as being unpatentable over United States application publication No. 2004/0078366 to Crooks, et al., (hereinafter Crooks, et al.) in view of Nevin;

69) That Crooks, et al., is an approach wherein there is parsing of a health care order based on the parsing, identification and interpretation of specific keywords, terms and abbreviations, wherein essentially a string-based order is parsed and "normalized", e.g., matched and replaced input with actual terms, to determine specific components such as drug dosage whereupon a distance is assigned using the well-known technique which identifies how many character changes had to be made to achieve a match with the rule-based database, Crooks, et al., not fingerprinting nor comparing fingerprints or employing interactivity or a graphical component;

70) That with respect to step (b) of claim 22 identifying the population of documents to be searched, there is no search of documents in Crooks, et al., but there is a search of a database of rules and only for the purpose of interpreting a medical order, no attempt being made to search for a document, or place the document in any type taxonomy;

71) That step (c5) provides for setting an offset and factor for numeric class, for instance, determining whether a number is within a particular range, the step representing an aspect of achieving a representation of text which is searchable as opposed to the Crooks, et al., approach which seeks an accurate grammatical representation;

72) That step (c8) provides that for each accessed, W, which is a number, converting such a number into a sequence of word numbers, WN, and normalizing these word numbers for fingerprinting, the Examiner citing paragraph 0024, lines 1-28 of Crooks, et al., and Crooks, et al., has nothing comparable to normalizing word numbers as, WN;

73) That step (c9) of claim 22 provides for marking the position and link of each, W, or normalized word number, WN, and the Examiner has cited paragraph 0026, line 31 et seq., of Crooks, et al.;

74) That Crooks, et al., at the above cited paragraph and line is concerned with an attempt to find an approximate match with the rule database, when an exact one cannot be found, the number of letters required to be changed to match a rule term in the database representing a distance, and such an approach has no relationship to the recitation of step (c9);

75) That step (c10) of claim 22 provides that for each, W, or normalized, WN, completing the normalization by reiterating steps (c8) and (c9), and the Examiner has cited paragraph 0026, lines 10-12 of Crooks, et al., with the commentary that refining is considered to represent repeating;

76) That with respect to the Examiner's commentary concerning step (c10) and the term "refining", the present invention is doing an iterative process to achieve optimal normalization while Crooks, et al., strives to obtain word matches and then refine by eliminating the junk, and there is no relationship between these methods nor their purpose;

77) That step (d) of claim 22 provides for fingerprinting the normalized documents, the Examiner citing paragraphs 24-26 of Crooks, et al., and that there is no fingerprinting whatsoever taught by Crooks, et al.;

78) That step (e) of claim 22 provides for forming one or more nets each comprising at least two nodes, one or more said nodes representing an evaluation criteria, said one or more nets exhibiting two or more spaced apart nodes connected by one or more interactions, the Examiner citing Fig. 1 of Nevin, and they reiterate commentary made in connection with claim 1 at step (f);

79) That step (f) of claim 22 provides that for each normalized document, calculating its geometric distance from a said node, the Examiner repeating the rejection made in connection with step (h) of claim 1 and they reassert their response concerning step (h) of claim 1;

80) That step (g) of claim 22 provides for displaying one or more nets at the display in combination with one or more document symbols representing a said document located in correspondence with said calculated relative distance, the Examiner citing the same component of Nevin as cited with respect to step (i) of claim 1 and they reassert their response to that rejection in response to this rejection;

81) That the final step of claim 22 provides for determining from said document symbol locations at said display, if any, those documents which are more likely to correspond with said evaluation criteria, the Examiner repeating the rejection asserted in connection with step (k) of claim 1 and the argument set forth therein is repeated for this rejection;

82) That claim 23 provides for steps (c8.1) through (c8.8) describing in detail step (c8) of claim 22 and all being rejected based upon paragraphs 0030 - 0032 of Crooks, et al., and that Crooks, et al., neither carries out nor suggests any of these steps;

83) That more specifically with respect to claim 23, step (c8.1), Crooks, et al., merely determines the presence of a date and uses it directly while the present step is developing a record that can be used for searching, Crooks, et al., carrying out no conversion to a float or integer and with respect to step (c8.2) applying an offset and factor to improve fingerprinting which Crooks, et al., does not carry out whatsoever;

84) That with respect to steps (c8.3)–(c8.8) there is no similarity or purpose in any way related to the teachings of Crooks, et al.;

85) That claim 24 describes that step (c8.3) further comprises the step (c8.3.1) setting the precision of, P, the normalized word number, WN, and step (c8.8) is carried out until the number of said successive positions, S, deriving said second component equal the value of said precision, R, the Examiner citing paragraphs 0030-0032 of Crooks, et al., in rejecting the claim;

86) That with respect to claim 24, Crooks, et al., is not utilizing precision, presumably for good reason, that one would not wish to use that approach in dealing with medical applications and both components of this claim utilize a precision function;

87) That all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like, so made, are punishable by fine, or imprisonment, or both, under § 1001 of Title 18, and that such willful false statements may jeopardize the validity of the application or any document resulting therefrom.

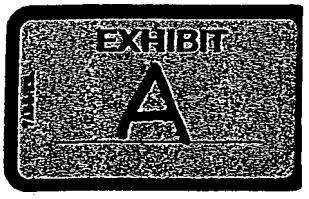
Further Declarants sayeth naught.

Date Feb 9, 2007

Dumont M. Jones

Date Feb 9, 2007

Vadim M. Koganov



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Summary: **Information discovery and analysis**
- **Consulting, software design and development**
- **Materials/chemical engineering, and business applications**

History:

2002-Present: Principal, Proximate Technologies, LLC
- Chief architect of "Application-Driven Chemistry" software platform for chemical and materials design—allows designers to move from design requirements to physical materials, using information discovery and optimization techniques.
- Generated new and existing candidate chemistries for an acoustical coupling application.
- Generated new and existing candidate coating chemistries for a polymer-coated silica fiber application requiring low refractive index.
- Co-authored new model for ascertaining whether certain compounds will exhibit single- or multi-phase behavior.
- Author or co-author of various other physical property models, details available on request.
- Primary design of software to facilitate visual discovery and analysis of generic data entities, including unstructured text documents. Associated patent application filed and published.
- Information discovery and analysis consulting for chemical-design and business applications. Current activities include consulting for materials informatics data transformation and structure-property modeling. Application examples available on request.

1993-Present: Principal, Black Bear Software Engineering, LLC
- Design and development of Windows and UNIX software for visualization of complex data systems, and various e-commerce and business components.
- Report-server automation, integration and security, with an emphasis on Actuate reporting systems.
- Design and analysis of predictive statistical models for materials design.

1989-1993: Software Development Scientist, Tripos Associates, Inc., St. Louis, MO.
- Design and development of the Tripos Open Force Field System.
- Development of Quantitative Structure-Property Relationships (QSPR) for chemical properties and related software.

1987-1989: Postdoctoral Research Associate, University of Massachusetts, Amherst, MA.
- Conducted theoretical studies of polymer solutions and suspensions, resulting in 3 technical publications in the open literature.

Technical Skills:
- Information analysis and knowledge discovery.
- Predictive statistical model design.
- Software design and implementation: Windows/UNIX, languages as required.

Education:

- Ph.D. in Chemical Engineering, University of Minnesota, Minneapolis, MN; December, 1986. Advisor: Prof. John S. Dahler. Dissertation Title: On the Theory of Laser-Assisted Collision Processes.

- B.S. in Chemical Engineering, University of Wisconsin at Madison, Madison, WI; September, 1985. Advisor: Prof. M. Moran. Research topic: Organic synthesis.

Publications/ Presentations:

- 15 articles in the open literature. Recent publications (2005,2006) concern models for evaluating whether inorganic compounds will be single- or multi-phase, and an outline of the Application-Driven Chemistry platform mentioned above.
- Several articles in press concerning the development of informatics algorithms and platforms for materials design (crystal structure; creation of luminoscity structure-property relationships, structures for accurate storage and retrieval of materials properties in databases, and correct reduction of heterogeneous materials data sets).

Vadim Koganov

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STRENGTHS

- 11 years experience in information systems architecture, design and development with emphasis on enterprise systems and applications.
- Extensive knowledge of the object-oriented development process.
- Microsoft Certified Solution Developer (MCSD, MCP).
- MBA degree in Technology Management

Languages: C#, VB.Net, Java, Visual Basic, XML ,XSLT, SQL, DHTML, JavaScript, C++, etc

Operating Systems: Microsoft Windows 2003/2000/NT/ 9x, Linux, UNIX.

Development Tools: MS Visual Studio 2003/2000/6.0, BizTalk Server 2002/2004, Jbuilder, UML/Rational Rose, MS Visual Source Safe, etc

EXPERIENCE

Software Architect/Developer (Ind.) March 2000 – present
Silicon Motif, Inc., Columbus, OH

Major Clients:

Ohio Department of Education, Columbus, OH
Solution Architect

- Architected, designed and led development of a brand-new integrated suite of applications composing a state-wide educator information and licensure system; was solely responsible for the development of the overall technical architecture and design;
- Designed, developed specifications for and oversaw the development of over 30 .Net Web Services composing the business tier of the Service-Oriented Architecture for the said educator information and licensure system;
- Architected and developed a set of enterprise infrastructure components, including reliable logging and configuration-based navigation;
- Designed and led development of over 10 large-scale ASP.Net web applications;
- Provided technical expertise, direction and leadership to the team of five developers;
- Designed and developed a large-scale data conversion and delivery system that performs transformation of statistical data from raw XML and Oracle database queries to a multitude of user-viewable documents, including HTML, SpreadsheetML, and native Microsoft Excel files;
- Architected and implemented monitoring services allowing on-demand data conversion and presentation through using a set of converter components;
- Developed a set of complex XSLT transformations;
- Provided technical know-how and direction to the development team ;

Tools: VS.Net 2003 /C#, XSLT, Oracle 9i, DHTML, XML-Spy 2005, Log4net, Aspose.Excel
Environment: Windows 2003/XP

American Health Holding, Inc., Columbus, OH
System Architect

- Architected, designed and developed an integrated suite of healthcare applications (Utilization Review, Case Management, etc) that serves as the main mission-critical system for the nationwide corporation;
- Designed and implemented a .Net Remoting-based data access infrastructure now utilized by several of the enterprise applications;
- Designed and developed a custom .Net-based XML rules engine to support medical necessity

continued...

EXPERIENCE (continued)

decision making process and workflow;
- Developed architectural approach and implemented a complex trading partner integration (import/export) solution (Microsoft BizTalk Server 2002);
- Architected and developed a complete electronic document generation, editing, and storage system with a web-based front end;
- Designed and developed a customizable thin-client reporting system;

Tools: VS.Net 2003 /C#/ VB.Net/ASP.Net, MS BizTalk Server 2002, MSMQ, ASP, MS XML/XSLT, DHTML, MS SQL Server 2000, MS Visual Basic 6.0, Crystal Reports
Environment: Windows 2000/2003/XP

Interstate Gas Supply, Columbus, OH
Solution Architect
- Architected and developed a multifaceted trading partner integration (import/export) solution (Microsoft BizTalk Server 2004);
- Designed, developed and implemented an n-tier GISB-compliant electronic data delivery system, including custom HTTP data upload mechanism, dispatch system service, and a management and administration web application.
- Integrated a variety of formats including multiple EDI transaction sets utilizing BizTalk Covast EDI Accelerator;
- Designed and implemented multiple complex processes utilizing MS BizTalk 2004 Orchestration;

Tools: VS.Net 2003 /C#/, MS BizTalk Server 2004, XML/XSLT, MS SQL Server 2000
Environment: Windows 2000/XP

Proximate Technologies, LLC – Columbus, OH
System Architect
- Developed architectural approach and implemented the data repository and the server-side application for information discovery and visualization solution;
- Designed and developed a Web-based query building and execution tool for interaction with and management of a complex data search engine;
- Co-authored a state-of-the-art data analysis solution (application for U.S. Patent Serial number 10/706352 - "Document Search Method with Interactively Employed Distance Graphics Display.")

Tools: VS.Net 2003/C#/ VB.Net, C++, MS XML/XSLT, MS SQL Server 2000, MS Visual Basic 6.0
Environment: Windows NT/2000/2003/XP

Charles River Associates, Inc. – Boston, MA
System Architect
- Envisioned and developed a large-scale data aggregation process and tax simulator which was used to generate local and state tax projections and calculations;
- Tuned and optimized the performance of the SQL Server tax data repository;
- Developed a dynamic reporting system capable of aggregating and summarizing large volumes of data produced by the tax simulator;

Tools: MS SQL Server 2000, MS Visual Basic 6.0, Crystal Reports
Environment: Windows NT/2000

EXPERIENCE (continued)

Donatos Pizzeria, Inc. – Columbus, OH
System Architect
- Designed, developed, and deployed a distributed order management and fulfillment solution to support online ordering;
- Optimized and tuned MS OLAP-based data warehousing solution;
- Developed and deployed a messaging application allowing for sharing and publication of the best practices for the stores nationwide;
- Architected and implemented an extensible intranet security architecture;

Tools: C#/VB.Net, Java 2, Sun J2EE, JMS, Apache Xerces, Exolab Castor, XML-RPC, XML/XSLT, DHTML, MS SQL Server 7.0/2000, SOAP, MS Visual Basic 6.0, Visual Studio 6.0
Environment: Linux, Windows NT/2000

Technical Project Leader January 1998 – October 2000
Compuware Corporation, Columbus, Ohio.
- Designed and developed electronic bill presentment and payment system based on CheckFree I-Solutions engine;
- Led design and development of the web-based dynamic bulletin distribution application;
- Designed and implemented extra-net security system based on ADSI and MS Site Server Personalization & Membership LDAP directory;
- Developed international n-tier web-based credit application and automobile payoff systems;
- Designed and developed a set of Automated Clearing House (ACH) applications;

Tools: IIS, MS Site Server 3.0, MTS, Active Server Pages, XML, DHTML, MS SQL Server 6.5/7.0, ADO, RDS, RDO, MS Visual Basic 5.0/6.0, MS Visual InterDev 1.0/6.0, MS Visual Modeler, Visual Source Safe;
Environment: Windows NT;

Software Engineer/System Administrator December 1996 – January 1998
American Heartland, Inc., Columbus, Ohio.
- Architected and developed set of front-end applications in VB 5.0;
- Designed and implemented relational database schema and developed over 400 stored procedures in SQL Server 6.5;
- Developed a 3-tier intranet reporting system;
- Created and supported company's World Wide Web site with online order processing system;

Tools: SQL Server 6.5, RDO, ASP, Visual Basic 5.0, Visual InterDev, Java, JavaScript, VBScript
Environment: Windows NT/95

DBA/Network Administrator April 1995 – December 1996
American Heartland, Inc., Columbus, Ohio
- Designed, installed and administered Windows NT/95 network.
- Developed relational database schemas.
- Designed, administered and updated information systems based on Microrim R:Base RDBMS

Tools: MS Fox Pro, Microrim R:Base, Lantastic
Environment: Windows 3.1/95.

Software/Hardware Consultant 1994 – 1996
PhytoLife Sciences, Inc. Columbus, Ohio.
- Set up communications between the U.S. and Moscow, Russia
- Designed and implemented the corporate World Wide Web site

Environment: UNIX

EDUCATION	**M.B.A.**, Concentration: Technology Management, GPA 3.82. Franklin University, Columbus, Ohio. Thesis: Software Development Project Management.	1999
	B.S., Computer Science, GPA 4.0 Franklin University, Columbus, Ohio. President's Honors.	1996
ADDITIONAL	U.S. Citizen, Fluent Russian.	

REFERENCES AVAILABLE UPON REQUEST

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)
Dumont M. Jones	)
Serial No.: 10/706,352	) Examiner Kimberly M. Lovel
Filed: November 12, 2003	) Group Art Unit 2167
For: "Document Search Method With Interactively Employed Distance Graphics Display"	)

COMMISSIONER OF PATENTS
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ALEXANDRIA, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132

Dumont M. Jones and Vadim M. Koganov declare as follows:

1) That they are the inventors named in the above-identified application for United States patent;

2) That their curriculums vitae are annexed hereto as an Exhibit A;

3) That they have reviewed the Office Action developed in connection with the above-identified application which was mailed May 18, 2006;

4) That certain of the steps of method claim 1 of the application have been rejected with respect to a published application for United States patent No. US2003/0135513 by Quinn, et al, filed August 27, 2002 (Quinn, et al.);

5) That Quinn, et al., relies on Provisional application No. 60/344,664 filed on August 27, 2001 (the Provisional), copy of which is annexed hereto as Exhibit B;

6) That the Examiner has applied Quinn, et al., in rejection of claims 1, 5, 13, 16 and 17 identifying in each component of rejection paragraph or paragraphs in Quinn, et al., which is said to support such rejection;

7) That they have compared those paragraphs in Quinn, et al., cited by the Examiner with the Provisional and are of the considered opinion that the Provisional is not descriptively supportive of those paragraphs;

8) That with respect to the introductory paragraph of claim 1 the Examiner has indicated that Quinn, et al., discloses a method for evaluating the text content of a database;

9) That a fundamental difference is present between the instant invention and Quinn, et al. in that the present invention is a searching method iteratively developing search questions and rules whereas Quinn, et al., is building a text database utilizing keyword attribute searches of the entries and is not concerned with a method for generating or iteratively generating questions utilized to effectively search a database;

10) That step (b) of claim 1 calls for gathering documents from said database into said system and the Examiner has cited paragraph 0040, lines 1- 4 of Quinn, et al., as representing such step, and that paragraph 0040 employs four predefined attributes, which are used to construct a database, while in contrast step (b) gathers documents from a pre-constructed database into a computer system with no attributes for searching the documents;

11) That the Provisional is not seen to descriptively support paragraph 0040;

12) That step (c) which provides for normalizing the gathered documents has been rejected with respect to paragraph 0055, lines 1-5 of Quinn, et al. which employs the term "normalized" but describes the normalization of the aggregate of data and not normalizing each document as set forth in step (c);

13) That the subject of normalization is not mentioned in the Provisional;

14) That step (d) of claim 1 describes the fingerprinting of the gathered documents, and this step has been rejected under paragraph 0054, of Quinn, et al., which describes that as illustrated in Fig. 2, fingerprints are extracted for storage in text and fingerprint database and in contrast step (d) fingerprints documents in a given and unaltered database and, while the same term, "fingerprinting" is used, it has an entirely different meaning;

15) That the subject matter of paragraph 0054 with respect to fingerprinting is not present in the Provisional.

16) That step (e) provides for determining a text criteria with respect to the document population, the Examiner citing paragraph 0093, line 4-7 Quinn, et al., which describes the organization of a database with respect to predetermined fixed criteria and step (e) text criteria are utilized to ultimately iteratively develop a search question and not to construct a database;

17) That in rejecting steps (f) through (k) of claim 1 the Examiner has cited U. S. patent application publication No. US2005/0086238 by Nevin, III (Nevin);

18) That step (f) of claim 1 describes forming a net comprising at least two nodes associated by at least one interaction displayable at the display as two or more spaced apart nodes connected by an interaction, and the Examiner has identified Fig. 1 in Nevin as representing this net;

19) That Nevin provides a collection of nodes which are inter-associated by a relationship, while the nodes of the present application are associated with an interaction, specifically, an effective force that attracts documents with related content which is quite different from the relationship, the latter approach having been well known in the art for decades;

20) That step (g) of claim 1 describes the loading of text criteria into at least one of the nodes, the Examiner rejecting that step with respect to paragraph 0081 of Nevin which

describes an organization algorithm and not this (search) criteria being loaded into a node;

21) That step (h) of claim 1 sets forth that for each document of the database, there is calculated geometric relative distance from a node to derive one or more node attractors, and in rejecting this step the Examiner has identified paragraphs 0031 and 0185 of Nevin and commented that the connection strength of the length from one node to another is considered to represent the "relative distance";

22) That Nevin describes that predetermined attribute data is stored into nodes and these nodes are linked by relationships of variable lengths whereas step (h) provides that for each document of a database its geometric relative distance from one or more nodes is calculated and that there are no documents in Nevin by which such calculation may be carried out, Nevin teaching only graphics defining a relationship between nodes, whereas by contrast the graphics location of nodes in the present invention is merely a matter of convenience;

23) That step (i) of claim 1 sets forth a displaying of the net at the display in combination with one or more document symbols each representing a document located in correspondence with the calculated relative distance, the Examiner identifying paragraphs 0033 and 0084 and Fig. 2 of Nevin with respect to this step;

24) That there are no document symbols and calculated relative distance described or suggested in Nevin, which only describes a positioning and relative relationship between nodes;

25) That paragraph 0084 and Fig. 2 of Nevin represent an algorithm to determine what nodes belong together and once a net is developed by Nevin that is the final result, whereas by contrast, in the instant application the net is merely a platform for organizing documents and, as noted, Nevin does not display document symbols or as much as consider such an arrangement;

26) That step (j) provides for visually examining the display of the net and document symbol and this step is identified as being revealed at paragraph 0084, lines 14-17 in Nevin;

27) That Nevin is irrelevant with respect to step (j) inasmuch as there are no documents in Nevin and there is no display of document symbols;

28) That step (k) of claim 1 provides for determining from the document symbol locations at the display, those documents, if any, which are more likely to correspond with the text criteria and the Examiner has identified paragraphs 0313 and 0315 of Nevin commenting that the user determines which categories are considered to be good or bad;

29) That with respect to step (k), paragraphs 0313 and 0315 have no applicability, there being no determination with respect to document symbol locations at the display and

from those symbol locations determining if any are more likely to correspond with text criteria and that there can be no way to equate step (k) with Nevin;

30) That claim 3 describes that step (g) loads the text criteria into a positive designated one of the nodes and the Examiner has indicated that the claim is described at paragraph 0031 and 0083, lines 4-14 of Nevin, commenting that data is stored in the nodes; a node can have a positive position;

31) That as noted above, the present invention has no concern with the position of nodes and the technique of Nevin is not concerned with whether a node is positive or negative and, in particular, positively or negatively attracting certain textual content in the sense of the present invention;

32) That claim 4 describes that step (f) forms the net as comprising a positive designated node and a null designated node connected by an interaction and the Examiner, citing Nevin at paragraphs 0083, 0084, lines 4-14 and 0123 states that the last node is used as the null node and the nodes are connected by lines to demonstrate an interaction;

33) That a null node in accordance with the invention is a node which has no content in it and therefore attracts no documents at all whereas Nevin describes that, during data entry if you don't identify the node you are interested in, the program as a default convention will put the argument on the last node and that this has no resemblance to the utilization of a null node as taught in the present invention;

34) That claim 5 describes that step (e) determines text criteria as criteria document textual material and, referring to paragraph 0093, lines 4-7 of Quinn, et al., the Examiner has indicated that the different genres are considered to represent the text criteria;

35) That paragraph 0093 of Quinn, et al., describes an organization of database with respect to predetermined fixed criteria and there is searching in Quinn, et al., against fixed criteria and not to the using of document textual material as criteria;

36) That the Provisional describes a one-touch playlist wherein the user may select a single starting criteria such as artist, album, or genre but does not disclose any organization of data with respect to sorting and grouping by artist name, etc., as set forth in Quinn, et al.;

38) That claim 5 further provides that step (g) comprises the steps of (g1) normalizing the criteria document textual material, the Examiner identifying paragraph 0055, lines 1-5 of Quinn, et al., with respect thereto and the claim further sets forth the step (g2) fingerprinting the normalized criteria document textual material, the Examiner identifying paragraph 0054 of Quinn, et al., in that regard;

39) That normalization as described at paragraph 0055 of Quinn, et al., is of a different type, being concerned with such things as correction of spelling and the like commonly

referred to as data regularization or data rationalization and there is no suggestion of normalizing criteria document textual material;

40) That with respect to step (g2), Quinn, et al., does not suggest a normalized criteria document textual material which is fingerprinted;

41) That claim 6 provides that step (e) determines positive text criteria and negative text criteria with respect to a document population, the Examiner citing Nevin paragraph 0084, line 4-14 and that Nevin is not concerned with search criteria, let alone positive and negative criteria;

42) That step (f) of claim 6 provides for the formation of a net comprising one or more positive designated nodes, one or more negative designated nodes and one or more interactions, the Examiner citing paragraph 0084 of Nevin, lines 4-14 and as discussed above, Nevin does not use interaction between positive and negative nodes but uses relationships generally identified by node position;

43) That step (g) of claim 6 provides for the loading of positive text criteria into positive designated nodes and negative text criteria into negative designated nodes, and the Examiner has cited paragraph 0031 of Nevin and indicated that data is stored in the nodes, and while the data might be stored in nodes, it is stored for a different purpose than the present invention;

44) That step (h) provides for the calculation for each document of the database its geometric relative distance from both positive nodes and negative nodes and the Examiner has cited paragraphs 0031 and 0185 of Nevin commenting that the connection strength of the link from one node to another is considered to represent relative distance and the Examiner fails to observe that the step at hand is one wherein relative distance is calculated with respect to documents and nodes, not between nodes as described in Nevin, Nevin not being a search technique, or a document organization technique, but a technique for graphically representing entity-relationship diagrams;

45) That step (l) of claim 8 provides for retrieving the identification of those documents resulting from step (k), and step (m) of claim 8 provides for viewing one or more of the documents identified in step (l) and determining the quality of the match thereof with step (e) text criteria, and the Examiner has cited paragraphs 0313 and 0315 of Nevin with respect thereto;

46) That with respect to claim 8, the paragraphs of Nevin cited has no relationship to documents, are not describing the same operation or even a similar operation and are not evaluating the quality of the match of documents with text criteria;

47) That step (n) of claim 9 provides for the identification of new text criteria as a result of step (m) determination of insufficient quality of match, step (o) of claim 9 provides for the adding of the identified new text criteria to the step (g) text criteria loaded in the positive

node, and step (p) of claim 9 reiterates steps (h) through (m), the Examiner citing paragraphs 0313 and 0315 of Nevin;

48) That with respect to claim 9, Nevin identifies the properties of nodes precisely and in advance whereas by contrast new text criteria is determined to improve a search question and the developed new test criteria is loaded into the positive node whereupon there is a reiteration of steps (h) through (m) and Nevin is not concerned with documents and the searching of their contents or any other kind of interactive process;

49) That step (q) of claim 10 describes that subsequent to step (m) that identification and viewing a list of features common to those documents the identification of which was retrieved in step (l), a step (r) identifying a new text criteria in correspondence with step (q) and viewing features common to those documents, the identification of which was retrieved in step (l), a step (s) of adding the identified new text criteria to the step (q) text criteria loaded into the positive node, and step (t) reiterating steps (h) through (m), the Examiner citing paragraphs 0313 - 0316 of Nevin;

50) That claim 10 looks to the extraction of common features and an iterative process which functions to improve the search by improving a question or rule and Nevin has nothing to do with documents but does deal with similarities or relationships but between nodes and not documents and interactions associated with nodes, and further there is no search in Nevin and no criteria addition to improve a search and lastly Nevin doesn't carry out the steps (q) through (s) and certainly does not reiterate them as set forth at step (t);

51) That step (k1) of claim 11 provides for determining additional text criteria where the document symbol locations are not likely to correspond with such text criteria, and step (k2) provides for adding additional text criteria to the text criteria determined at step (e), the Examiner citing paragraph 0313-0316 of Nevin;

52) That with respect to claim 11, Nevin is not addressing the subject matter of documents nor the search associated with documents nor does Nevin address the subject matter of adding additional text criteria to improve a search;

53) That with respect to claim 12, step (l) is carried out by drawing at the display of a net a boundary defining region of the document symbols, the Examiner citing paragraph 0320 of Nevin and indicating that the boundary region is determined by the available screen space;

54) That Nevin at paragraph 0320 is describing the accommodation of a need for arithmetically changing the shape of a net within the space confines of the display, whereas claim 12 selects a grouping of documents by drawing boundaries on the display around document symbols and there are no documents in Nevin nor a technique for selecting them;

55) That step (f) of claim 13 provides for selecting a document attribute to be correlated and the criteria for establishing an attribute value match, and the Examiner cites paragraph 0093 lines 4-7 with the commentary that the different genres are considered to represent the text criteria;

56) That step (f) of claim 13 is associated with two delimitedregions at the display that is further associated with step (g) determining value matched pairs, and paragraph 0093 of Quinn, et al., has nothing to do with the procedures of claim 13, Quinn, et al., speaking of three clearly defined attributes as opposed to the instant method wherein text search attributes are employed which are not so predetermined and could represent anything from a portion of a word to an entire book;

57) That step (g) of claim 13 provides for determining the presence of one or more document attribute value match pairs between first and second regions and the Examiner has cited paragraph 0094 of Quinn, et al., stating that grouping in the attributes is considered to represent creating matched pairs, and there are no documents in Quinn, et al., there are no regions in Quinn, et al., and there are no document attribute value matched pairs in Quinn, et al;

68) That paragraph 0094 of Quinn, et al., is not supported in the Provisional;

69) That step (b) of claim 13 provides for forming one or more nets, each comprising at least two nodes associated by at least one interaction, one or more of the nodes representing an evaluation criteria and one or more being viewable at the display, and the Examiner has cited Fig. 1 and paragraph 0081 of Nevin, and Nevin stores all of the data in nodes whereas document criteria are stored in the nodes of the instant invention and further with respect to the entirety of claim 13 there is nothing in Nevin describing how two nets would interact with each other, that is two nets are used together to do a searching feature that neither net could do alone;

70) That step (c) of claim 13 provides for treating documents to have an attribute value and calculating for each document a geometric relative distance with respect to node criteria and displaying corresponding document symbols, the Examiner citing paragraphs 0031 and 0185 of Nevin, stating that the connection strength of the length from one node to another is considered to represent relative distance;

71) That the Examiner's analysis of step (c) of claim 13 is incorrect for reasons above stated and particularly because Nevin has nothing to do with documents nor document symbol nor calculation of a relative distance with respect to a node criteria;

72) That step (d) of claim 13 provides for delimiting at the display a first region of the document symbols, and the Examiner cites paragraph 0031 and Fig. 1 of Nevin stating that linking the nodes together is considered to represent delimiting and the connection of node 1 to node 2 is considered to represent a first region; Evidence Page 25 of 36

73) That with respect to step (d) of claim 13 there is no concept of region at all in Nevin and the Examiner's observation that connecting two nodes together constitutes a region is simply incorrect, and the Examiners indication that linking the nodes together represents delimiting is incorrect and there are no document symbols in Nevin to establish a delimited region;

74) That step (e) of claim 13 provides for delimiting at the display a second region of document symbols and the Examiner has applied the same rejection as provided with step (d) and the Applicants submits that there are no document symbols in Nevin, there are not two regions in Nevin which are delimited, and the linking of node 2 to node 3 does not constitute a region of document symbols;

75) That step (h) of claim 13 displays correlations as are developed in connection with step (g) as they exist between first and second regions, and the Examiner's commentary citing paragraph 0033 stating that the display of nodes based on a location calculated from force parameters is considered to represent displaying correlations is simply and totally incorrect, Nevin being concerned with entirely different subject matter where for correlation two or more nodes are bound closely in space is unrelated to the invention where correlation is concerned with showing how two nets work together to show how a set of documents are closely grouped within two or more organization systems (nets);

76) That claim 14 provides that step (d) provides a first region extending over more than one net and includes a step (d1) of mapping the first region to a first document set by selecting the union or intersection of documents on different nets, and the Examiner has cited paragraph 0031 and Fig. 1 of Nevin without comment and there are no document symbols in Nevin, there is no searching in Nevin, there is no first region in Nevin, there is no first region extending over more than one net in Nevin, there is no suggestion of mapping of the first region to a first document set by selecting the union or intersection of documents on different nets in Nevin;

77) That claim 15 is similar to claim 14 but provides the second region extending over more than one net and includes the step of mapping the second region to a second document set by selecting the union or intersection of documents on different nets, and the Examiner has cited the same components of Nevin, and the same response provided with respect to claim 14 also applies to claim 15 in that no regions over nets, and no mapping by selecting the union or intersection of documents on different nets so much as suggested in Nevin;

78) That claim 16 provides that step (f) selects the criteria for establishing an attribute value match by defining an attribute value tolerance, and the Examiner has cited paragraphs 0009 and 0093, lines 4-7 of Quinn, et al., stating the different genres are considered to represent the text criteria;

79) That paragraph 0009 of Quinn, et al., is background history that efforts in the past have weighted some joint attributes to find similarity and that the paragraph is not supported in the Provisional, and further, it may be observed that the attributes discussed are predetermined established facts and thus, there can be no attribute value tolerance as provided in claim 16;

80) That claim 17, dependent upon claim 16 provides that step (g) determines the presence of a document of an attribute matched pair by determining whether the attribute value of a document in the first region is equal to the attribute value of a document in the second region within the attribute value tolerance, and the Examiner again has referenced paragraphs 0009 and 0093 of Quinn, et al.;

81) That there are no first and second regions suggested in Quinn, et al., and as is quite apparent, there is no determination of the presence of a document attribute matched pair between regions within an attribute value tolerance as additionally discussed above in connection with claim 16;

82) That claim 18 provides that step (d) is carried out by providing a computer generated line or lines visible at the display, and the Examiner has cited paragraph 0083 of Nevin;

83) That claim 18 with respect to step (d) draws computer generated lines delimiting method display of first region of document symbols, and that there are no document symbols nor are there regions suggested in Nevin, Nevin only describing the positioning of lines between nodes which basically are representations of some predetermined relationship between two nodes, an arrangement that has no relevance to claim 18;

84) That claim 19 provides that step (e) is carried out by providing a computer generated line or lines visible at a display, the Examiner again citing paragraph 0083 of Nevin and the Declarants reassert the response given in connection with claim 18 to this rejection;

85) That claim 19 provides that step (e) which delimits a second region of document symbols is carried out by providing a computer generated line or lines visible at a display, and the Examiner has cited paragraph 0083 of Nevin which, as discussed in connection with claim 18 provides a line which basically is a representation of some predetermined relationship between two nodes which has no suggestion of delimiting a second region of document symbols as well as no suggestion of document symbols at all, and no suggestion of delimiting by computer generated lines about these document symbols;

86) That claim 20 provides that step (h) is carried out by providing a visible line at the display connecting two document symbols and representing the correlation developed in connection with step (g) of claim 13 and the Examiner has cited paragraph 0083 of Nevin and, thus, the commentary given above in connection with claims 18 and 19 applies, but now with respect to providing a visible line between two document symbols

representing a correlation, the present invention having documents and nodes, Nevin having only nodes;

87) That claim 21 provides that step (f) selects said document attribute to be correlated and the criteria for establishing an attribute value match through selecting the document attribute or document identification and step (g) identifies the same document in each of the first and second regions as a correlation and the Examiner has cited paragraph 0093, lines 4-7 and 0094 of Nevin in carrying out the rejection;

88) That claim 21 looks to see where a particular document symbol appears in two different kinds of organizations, and Nevin concerns no document symbols, no regions and provides no discussion of correlation but only the relationship between nodes, not document symbols;

89) That they observe that claims 22-24 have been rejected under §103 of the Patent Statute as being unpatentable over United States application publication No. 2004/0078366 to Crooks, et al., (Crooks, et al.) in view of Nevin and in commenting upon the rejection, the Examiner has stated that Crooks, et al., discloses a method for searching the text content of a document database with respect to a population of documents and that this observation is in error in that the database of Crooks, et al., is one of rules, i.e., medical terms and not the text content of documents;

90) That Crooks, et al., is an approach wherein there is parsing of a health care order based on the parsing, identification and interpretation of specific keywords, terms and abbreviations, wherein essentially a string-based order is parsed and "normalized", e.g., matched and replaced input with actual terms, to determine specific components such as drug dosage whereupon a distance is assigned using the well-known technique which identifies how many character changes had to be made to achieve a match with the rule-based database, Crooks, et al., not fingerprinting nor comparing fingerprints or employing interactivity or a graphical component;

91) That with respect to step (b) of claim 22 identifying the population of documents to be searched, there is no search of documents but there is a search of a database of rules and only for the purpose of interpreting a medical order, no attempt being made to search for a document, or place the document in any type taxonomy;

92) That step (c5) provides for setting an offset and factor for numeric class, for instance, determining whether a number is within a particular range, the step representing an aspect of achieving a representation of text which is searchable as opposed to the Crooks, et al., approach which seeks an accurate grammatical representation;

93) That step (c8) provides that for each accessed, W, which is a number, converting such a number into a sequence of word numbers, WN, and normalizing these word numbers for

fingerprinting, the Examiner citing paragraph 0024, lines 1-28 of Crooks, et al., and Crooks, et al., has nothing comparable to normalizing word numbers as, WN;

94) That step (c9) of claim 22 provides for the marking the position and link of each, W, or normalized word number, WN, and the Examiner has cited paragraph 0026, line 31 et seq., of Crooks, et al.;

95) That Crooks, et al., at the above cited paragraph and line is concerned with an attempt to find an approximate match with the rule database, when an exact one cannot be found, the number of letters required to be changed to match a rule term in the database representing a distance, and such an approach has no relationship to the recitation of step (c9);

96) That step (c10) of claim 22 provides that for each, W, or normalized, WN, completing the normalization by reiterating steps (c8) and (c9), and the Examiner has cited paragraph 0026, lines 10-12 of Crooks, et al., with the commentary that refining is considered to represent repeating;

97) That with respect to the Examiner's commentary concerning step (c10) and the term "refining", the present invention is doing an iterative process to achieve optimal normalization while Crooks, et al., strives to obtain word matches and then refine by eliminating the junk, and there is no relationship between these methods nor their purpose;

98) That step (d) of claim 22 provides for fingerprinting the normalized documents, the Examiner citing paragraphs 24-26 of Crooks, et al., and that there is no fingerprinting whatsoever taught by Crooks, et al.;

99) That step (e) of claim 22 provides for forming one or more nets each comprising at least two nodes, one or more said nodes representing an evaluation criteria, said one or more nets exhibiting two or more spaced apart nodes connected by one or more interactions, the Examiner citing Fig. 1 of Nevin, and he reiterates commentary made in connection with claim 1 at step (f);

100) That step (f) of claim 22 provides that for each normalized document, calculating its geometric distance from a said node, the Examiner repeating the rejection made in connection with step (h) of claim 1 and he reasserts his response concerning step (h) of claim 1;

101) That step (g) of claim 22 provides for displaying one or more nets at the display in combination with one or more document symbols representing a said document located in correspondence with said calculated relative distance, the Examiner citing the same component of Nevin as cited with respect to step (i) of claim 1 and he reasserts his response to that rejection in response to this rejection;

102) That the final step of claim 22 provides for determining from said document symbol locations at said display, if any, those documents which are more likely to correspond with said evaluation criteria, the Examiner repeating the rejection asserted in connection with step (k) of claim 1 and the argument set forth therein is repeated for this rejection;

103) That claim 23 provides for steps (c8.1) through (c8.8) describing in detail step (c8) of claim 22 and all being rejected based upon paragraph 0030 - 0032 of Crooks, et al., and that Crooks, et al., neither carries out nor suggests any of these steps;

104) That more specifically with respect to claim 23, step (c8.1), Crooks, et al., merely determines the presence of a date and uses it directly while the present step is developing a record that can be used for searching, Crooks, et al., carrying out no conversion to a float or integer and with respect to step (c8.2) applying an offset and factor to improve fingerprinting which Crooks, et al., does not carry out whatsoever;

105) That with respect to step (c8.3)–(c8.8) there is no similarity or purpose in any way related to the teachings of Crooks, et al.;

106) That claim 24 describes that step (c8.3) further comprises the step (c8.3.1) setting the precision of, P, the normalized word number, WN, and step (c8.8) is carried out until the number of said successive positions, S, deriving said second component equal the value of said precision, R, the Examiner citing paragraphs 0030-0032 of Crooks, et al., in rejecting the claim;

107) That with respect to claim 24, Crooks, et al., is not utilizing precision, presumably for good reason, that one would not wish to use that approach in dealing with medical applications and both components of this claim utilize a precision function;

108) That all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like, so made, are punishable by fine, or imprisonment, or both, under § 1001 of Title 18, and that such willful false statements may jeopardize the validity of the application or any document resulting therefrom.

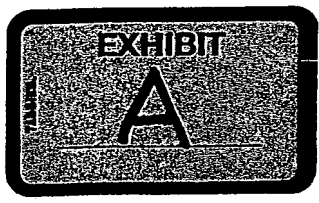
Further Declarants sayeth naught.

Date August 15, 2006

Dumont M. Jones

Date August 15, 2006

Vadim M. Kogarov



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Summary: **Information discovery and analysis**
- **Consulting, software design and development**
- **Materials/chemical engineering, and business applications**

History:

2002-Present: Principal, Proximate Technologies, LLC
- Chief architect of "Application-Driven Chemistry" software platform for chemical and materials design--allows designers to move from design requirements to physical materials, using information discovery and optimization techniques.
- Generated new and existing candidate chemistries for an acoustical coupling application.
- Generated new and existing candidate coating chemistries for a polymer-coated silica fiber application requiring low refractive index.
- Co-authored new model for ascertaining whether certain compounds will exhibit single- or multi-phase behavior.
- Author or co-author of various other physical property models, details available on request.
- Primary design of software to facilitate visual discovery and analysis of generic data entities, including unstructured text documents. Associated patent application filed and published.
- Information discovery and analysis consulting for chemical-design and business applications. Current activities include consulting for materials informatics data transformation and structure-property modeling. Application examples available on request.

1993-Present: Principal, Black Bear Software Engineering, LLC
- Design and development of Windows and UNIX software for visualization of complex data systems, and various e-commerce and business components.
- Report-server automation, integration and security, with an emphasis on Actuate reporting systems.
- Design and analysis of predictive statistical models for materials design.

1989-1993: Software Development Scientist, Tripos Associates, Inc., St. Louis, MO.
- Design and development of the Tripos Open Force Field System.
- Development of Quantitative Structure-Property Relationships (QSPR) for chemical properties and related software.

1987-1989: Postdoctoral Research Associate, University of Massachusetts, Amherst, MA.
- Conducted theoretical studies of polymer solutions and suspensions, resulting in 3 technical publications in the open literature.

Technical Skills:
- Information analysis and knowledge discovery.
- Predictive statistical model design.
- Software design and implementation: Windows/UNIX, languages as required.

Education:

- Ph.D. in Chemical Engineering, University of Minnesota, Minneapolis, MN; December, 1986. Advisor: Prof. John S. Dahler. Dissertation Title: On the Theory of Laser-Assisted Collision Processes.

- B.S. in Chemical Engineering, University of Wisconsin at Madison, Madison, WI; September, 1985. Advisor: Prof. M. Morari. Research topic: Organic synthesis.

Publications/ Presentations:

- 15 articles in the open literature. Recent publications (2005,2006) concern models for evaluating whether inorganic compounds will be single- or multi-phase, and an outline of the Application-Driven Chemistry platform mentioned above.
- Several articles in press concerning the development of informatics algorithms and platforms for materials design (crystal structure; creation of luminoscity structure-property relationships, structures for accurate storage and retrieval of materials properties in databases, and correct reduction of heterogeneous materials data sets).

Vadim Koganov

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STRENGTHS

- 11 years experience in information systems architecture, design and development with emphasis on enterprise systems and applications.
- Extensive knowledge of the object-oriented development process.
- Microsoft Certified Solution Developer (MCSD, MCP).
- MBA degree in Technology Management

Languages: C#, VB.Net, Java, Visual Basic, XML ,XSLT, SQL, DHTML, JavaScript, C++, etc

Operating Systems: Microsoft Windows 2003/2000/NT/ 9x, Linux, UNIX.

Development Tools: MS Visual Studio 2003/2000/6.0, BizTalk Server 2002/2004, Jbuilder, UML/Rational Rose, MS Visual Source Safe, etc

EXPERIENCE

Software Architect/Developer (Ind.) March 2000 – present
Silicon Motif, Inc., Columbus, OH

Major Clients:

Ohio Department of Education, Columbus, OH
Solution Architect

- Architected, designed and led development of a brand-new integrated suite of applications composing a state-wide educator information and licensure system; was solely responsible for the development of the overall technical architecture and design;
- Designed, developed specifications for and oversaw the development of over 30 .Net Web Services composing the business tier of the Service-Oriented Architecture for the said educator information and licensure system;
- Architected and developed a set of enterprise infrastructure components, including reliable logging and configuration-based navigation;
- Designed and led development of over 10 large-scale ASP.Net web applications;
- Provided technical expertise, direction and leadership to the team of five developers;
- Designed and developed a large-scale data conversion and delivery system that performs transformation of statistical data from raw XML and Oracle database queries to a multitude of user-viewable documents, including HTML, SpreadsheetML, and native Microsoft Excel files;
- Architected and implemented monitoring services allowing on-demand data conversion and presentation through using a set of converter components;
- Developed a set of complex XSLT transformations;
- Provided technical know-how and direction to the development team ;

Tools: VS.Net 2003 /C#, XSLT, Oracle 9i, DHTML, XML-Spy 2005, Log4net, Aspose.Excel
Environment: Windows 2003/XP

American Health Holding, Inc., Columbus, OH
System Architect

- Architected, designed and developed an integrated suite of healthcare applications (Utilization Review, Case Management, etc) that serves as the main mission-critical system for the nationwide corporation;
- Designed and implemented a .Net Remoting-based data access infrastructure now utilized by several of the enterprise applications;
- Designed and developed a custom .Net-based XML rules engine to support medical necessity

continued...

EXPERIENCE (continued)

decision making process and workflow;

- Developed architectural approach and implemented a complex trading partner integration (import/export) solution (Microsoft BizTalk Server 2002);
- Architected and developed a complete electronic document generation, editing, and storage system with a web-based front end;
- Designed and developed a customizable thin-client reporting system;

Tools: VS.Net 2003 /C#/ VB.Net/ASP.Net, MS BizTalk Server 2002, MSMQ, ASP, MS XML/XSLT, DHTML, MS SQL Server 2000, MS Visual Basic 6.0, Crystal Reports
Environment: Windows 2000/2003/XP

Interstate Gas Supply, Columbus, OH
Solution Architect

- Architected and developed a multifaceted trading partner integration (import/export) solution (Microsoft BizTalk Server 2004);
- Designed, developed and implemented an n-tier GISB-compliant electronic data delivery system, including custom HTTP data upload mechanism, dispatch system service, and a management and administration web application.
- Integrated a variety of formats including multiple EDI transaction sets utilizing BizTalk Covast EDI Accelerator;
- Designed and implemented multiple complex processes utilizing MS BizTalk 2004 Orchestration;

Tools: VS.Net 2003 /C#/, MS BizTalk Server 2004, XML/XSLT, MS SQL Server 2000
Environment: Windows 2000/XP

Proximate Technologies, LLC – Columbus, OH
System Architect

- Developed architectural approach and implemented the data repository and the server-side application for information discovery and visualization solution;
- Designed and developed a Web-based query building and execution tool for interaction with and management of a complex data search engine;
- Co-authored a state-of-the-art data analysis solution (application for U.S. Patent Serial number 10/706352 - "Document Search Method with Interactively Employed Distance Graphics Display.")

Tools: VS.Net 2003/C#/ VB.Net, C++, MS XML/XSLT, MS SQL Server 2000, MS Visual Basic 6.0
Environment: Windows NT/2000/2003/XP

Charles River Associates, Inc. – Boston, MA
System Architect

- Envisioned and developed a large-scale data aggregation process and tax simulator which was used to generate local and state tax projections and calculations;
- Tuned and optimized the performance of the SQL Server tax data repository;
- Developed a dynamic reporting system capable of aggregating and summarizing large volumes of data produced by the tax simulator;

Tools: MS SQL Server 2000, MS Visual Basic 6.0, Crystal Reports
Environment: Windows NT/2000

EXPERIENCE (continued)

Donatos Pizzeria, Inc. – Columbus, OH
System Architect
- Designed, developed, and deployed a distributed order management and fulfillment solution to support online ordering;
- Optimized and tuned MS OLAP-based data warehousing solution;
- Developed and deployed a messaging application allowing for sharing and publication of the best practices for the stores nationwide;
- Architected and implemented an extensible intranet security architecture;

Tools: C#/VB.Net, Java 2, Sun J2EE, JMS, Apache Xerces, Exolab Castor, XML-RPC, XML/XSLT, DHTML, MS SQL Server 7.0/2000, SOAP, MS Visual Basic 6.0, Visual Studio 6.0
Environment: Linux, Windows NT/2000

Technical Project Leader January 1998 – October 2000
Compuware Corporation, Columbus, Ohio.
- Designed and developed electronic bill presentment and payment system based on CheckFree I-Solutions engine;
- Led design and development of the web-based dynamic bulletin distribution application;
- Designed and implemented extra-net security system based on ADSI and MS Site Server Personalization & Membership LDAP directory;
- Developed international n-tier web-based credit application and automobile payoff systems;
- Designed and developed a set of Automated Clearing House (ACH) applications;

Tools: IIS, MS Site Server 3.0, MTS, Active Server Pages, XML, DHTML, MS SQL Server 6.5/7.0, ADO, RDS, RDO, MS Visual Basic 5.0/6.0, MS Visual InterDev 1.0/6.0, MS Visual Modeler, Visual Source Safe;
Environment: Windows NT;

Software Engineer/System Administrator December 1996 – January 1998
American Heartland, Inc., Columbus, Ohio.
- Architected and developed set of front-end applications in VB 5.0;
- Designed and implemented relational database schema and developed over 400 stored procedures in SQL Server 6.5;
- Developed a 3-tier intranet reporting system;
- Created and supported company's World Wide Web site with online order processing system;

Tools: SQL Server 6.5, RDO, ASP, Visual Basic 5.0, Visual InterDev, Java, JavaScript, VBScript
Environment: Windows NT/95

DBA/Network Administrator April 1995 – December 1996
American Heartland, Inc., Columbus, Ohio
- Designed, installed and administered Windows NT/95 network.
- Developed relational database schemas.
- Designed, administered and updated information systems based on Microrim R:Base RDBMS

Tools: MS Fox Pro, Microrim R:Base, Lantastic
Environment: Windows 3.1/95.

Software/Hardware Consultant 1994 – 1996
PhytoLife Sciences, Inc. Columbus, Ohio.
- Set up communications between the U.S. and Moscow, Russia
- Designed and implemented the corporate World Wide Web site

Environment: UNIX

EDUCATION	**M.B.A.**, Concentration: Technology Management, GPA 3.82. Franklin University, Columbus, Ohio. Thesis: Software Development Project Management.	1999
	B.S., Computer Science, GPA 4.0 Franklin University, Columbus, Ohio. President's Honors.	1996
ADDITIONAL	U.S. Citizen, Fluent Russian.	

REFERENCES AVAILABLE UPON REQUEST

Related Proceedings Appendix

None